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## ORIGINAL ARTICLES.

### TREATMENT OF ACUTE PNEUMONIA IN THE ADULT.

F. R. MILLARD, M.D., SAN DIEGO, CAL.

When the lung is inflamed there is, whether from an increased amount of fibrin in the blood or an increased tendency to its coagulation, coagulable matter forced into the intercapillary spaces consequent on the difficulty with which the blood circulates through the inflamed organ. Every one must have seen that a gallon of water can be got out of a jug quicker and easier than a gallon of molasses. All physicians who have used the lancet in pneumonia have seen that after fifteen or thirty ounces of blood have been drawn it flows more quickly and easily. But others have so recently given the readers of *THE REPORTER* the arguments in favor of venesection in pneumonia that it is not now necessary to repeat them. It is *always* beneficial in the earliest stage, but the country doctor does not always see the patient until that stage is passed. Later in the course of the disease, the patient sometimes gets into a condition where bleeding is essentially the sheet anchor of treatment. It is when the right heart is unable to completely empty itself. This stage is very seldom reached if treatment has been prompt and proper. To return to our jug. If one takes one-half gallon of molasses out of it, and put in one-half gallon of water, one can empty it in one-half the time necessary before the dilu-

tion. Knowing that fact, it seems to me more reasonable in the treatment of acute pneumonia always to reduce this viscosity of the blood rather than to add to the poison generated by the fever another species of poison supposed to take off some of the pressure on the other side of the circulation.

But venesection is not the only means we have of reducing the hyperfibrinosis of the blood. All physicians know that thirty grains of bicarbonate of potash in three ounces of water, given every four hours will soon reduce the hyperfibrinosis in acute rheumatism. How many have tried it in pneumonia? It is a remedy not devoid of danger, though there is less danger in using it than any of the nerve poisons so highly lauded by some of our enterprising chemists in Europe. A doctor was induced to try it and after four months wrote that all his cases, eighteen in number, their ages ranging from four months to eighty-four years, had recovered. One year later, he wrote that of uncomplicated cases he had lost none.

Nearly every author who recommends blisters in pneumonia, advises against applying them in the early stage for fear they *may* cause an increase in the fever and extension of the inflamed area. I do not recall a single reputable author who says he *knows from his own observation*

that it will do so. Noticing that so many writers used words that were almost identical in this advice, aroused in me a suspicion that it was a belief handed down from father to son, as illustrations that do not illustrate are handed down from one surgical author to another. Nature has been called a relentless step-mother, but I had not practised many years before I had come to regard her as relentlessly kind, for she had often cured my patients in spite of so-called scientific treatment which common-sense told me was bad treatment. This continued unvarying kindness emboldened me to subject some of the accepted theories of practice to the test of experiment. "One swallow does not make a summer," neither does a single success or failure settle the value or worthlessness of any line of treatment.

Recently, during a discussion by a state medical society of the treatment of pneumonia, the question was asked, "Why, considering the small amount of depletion a blister achieves, the benefit was so great?" No answer was published. Some of us were taught in the olden time that next to the lancet, a cantharides blister of generous dimensions was the quickest and surest means to reduce the amount of fibrin in the blood. Has the importation of the *pneumococcus* changed the blood or tissues? It requires some hours for a blister to get in all its work, and it is not possible during those hours to so act on the circulation as to get the benefit of the blister before the inflammation has done all the damage to the lung it is capable of doing. Wishing to test the relative value of early and late blisters and in a measure eliminate the personal factor, I induced a friend in another state to take up the investigation with me. We agreed to divide our cases fairly between early and late blistering for one year; after that divide them as we saw fit, and at the end of ten years we would compare our ideas. At the end of the term, my friend wrote that for some years he had not seen a previously healthy person ill with pneumonia too early to apply a blister. The fact that my friend gained and held the largest practice in his town, in competition with three or four other regular physicians, is ground for at least strong suspicion that he was fairly successful in his treatment. Our treatment was to apply a blister and give 1-16 grain of tartar emetic in a teaspoon-

ful of water every half hour until decided nausea was induced, when the time between doses was increased as tolerance was acquired, always maintaining nausea until expectoration was free and the cough caused no pain; after this whatever mild tonic seemed indicated for a few days. In some cases in any locality, and in most cases in malarial localities, three or four grains of calomel, in doses from  $\frac{1}{2}$  to one grain should be given during the first six or eight hours, and, sometimes, may need to be repeated. Free catharsis may occur, but tolerance is so easily acquired that omitting a dose or two is all that is required. If it is really necessary to check hypercatharsis, a few small doses of an imitation Dover's powder with nitrate of potash as a diluent will soon quiet matters. The hygroscopic nature of the nitrate is an objection, but it is far preferable to the inert sugar of milk. The objection does not hold against Dr. Dover's powder which may be used if you can get it. By the way, I wonder what the old scientist said when he saw (if he did see it) our late U. S. P., and found that the committee had emasculated his truly scientific recipe and then called the product "Dover's powder." I imagine he uttered a prayer, or something in favor of or about them. The relief, or apparent benefit following the administration of the powder will often be a strong temptation to continue the use of it. But do not give more nor continue it longer than is necessary to moderate the hypercatharsis, or you will certainly prolong the illness; and may do even more harm than that.

Should the patient unfortunately fall into that condition where the right heart is unable to completely empty itself, venesection should be resorted to to the extent necessary to relieve the heart. In some cases ten or twelve ounces will be sufficient. In other cases twice that quantity may be required. After which keep up the heart tone with—alcohol? Never! "But," says the user of alcohol, "it lengthens and strengthens the heart stroke and beautifully equalizes the circulation!" So does "dope" lengthen, strengthen and equalize the stride of the race-horse, but the judicious owner would rather lose the race than give "dope" to a valuable animal. Alcohol does its work by, and only so far as it produces, anesthesia of the nerve centres. The user also says it re-

tards tissue change and thus husbands the strength. Does it? And if so, is such a husbanding desirable? The patient is ill because there is matter out of its right place in the lung, he will never be well until that matter is gotten rid of, and I know of only one way it has ever been gotten rid of and that is by tissue change. If the advocates of alcohol will tell me of a better way I will be only to glad to learn it. Digitalis will do all for the circulation that alcohol can, and is a true tonic to the heart muscle also. I generally give strychnine, which is not only a true heart tonic but a respiratory tonic as well. 1-200 or 1-180 grain every half hour until the gange of the patient is obtained, and then a sufficient dose every three or four hours. A larger dose may be given three times a day, but to me it seems best to give a smaller dose at shorter intervals.

The over-nice doctor and the lady nurse object to blisters because the poultice is "nasty and troublesome." I have never yet heard a patient who has experienced the benefit a well-treated blister gives object to the "nastiness or the trouble," nor the pain either, when told it was best a blister be applied. On the contrary, I have often been urged to apply one, and have refused when I was morally certain the patient would get well before a blister could be made to heal. It may seem superfluous to tell a doctor how to blister a pneumonic patient, but having had in blisters, no little experience of the "know how it is yourself" kind, and having seen them so often badly treated in consultation cases, at the risk of telling a twice-told tale I shall give my method. Cleanse the surface with hot water and soap, and apply a well-fitted bandage with suspenders or shoulder tapes attached. Then put on the blister and secure it in place with the bandage. In about four hours, or so soon as pin-head-sized vesicles appear, remove the vesicant and apply a poultice of flaxseed meal, ground elm-bark, or of bread and milk. Be sure the poultice is thick, soft and smooth. Over this put a piece of oiled silk larger than the poultice, and secure with the bandage. In four hours remove and open the blebs, cutting out from the most dependent part a piece of cuticle sufficiently large to effectually prevent refilling. So long as the discharge is free the poultice should be renewed as often as once in four hours, and if the

other treatment has been judicious, the surface may be allowed to heal of it own accord.

I believe this plan of treating pneumonia the best the country doctor can follow in the large majority of his cases. Few caretakers will be so dull they cannot learn to omit a dose of the medicine every time the patient vomits; and few will be able to correctly read the clinical thermometer and follow the road it indicates, and this is absolutely essential in treating pneumonia by the continued applications of snow or ice, which is the ideal treatment when competent attendants can be had.

There is a class of cases where every possible effort should be made to get such attendants. I allude to those who have had repeated attacks at short intervals. I think patients so treated are less liable to succeeding attacks. There are those still living who were so treated in 1857, and who have had no attacks since, but who had previously had from two to five attacks, each, at intervals of one or two years. As most of them are living on the same farms they have, of course, been subjected to the same climatic influences as before.

Nor is this treatment inconsistent with the advice given to always reduce the hyperfibrinosis of the blood. During the year 1865 and 1866, I made many comparisons of blood drawn before treatment, and that drawn after three or four days of tartar emetic and blister and after the same duration of treatment by continuous cold, and I found that the reduction was practically the same under both methods. The intelligent physician who faithfully follows either plan will not ask, "can pneumonia be aborted." And if he be asked the question he can hold his head like a man, and speak out loud and plain, "Yes Sir, if you please!"—and he knows how to do it. My conviction is very firm, that if a proper reduction was always obtained, there would follow a large diminution in the number of cases of recurring and chronic pneumonia, as well as of fibroid phthisis. This conviction is based on the subsequent history of patients treated on different plans, observations having been continued some years after treatment. My opportunity for following up the several histories has been, at least, fairly good, for the shortest term of my practice in any one community was fifteen

years. As no directions have been given for the "cold" plan, I will say that the mode I followed was practically the same as has been used by Professor Mays. Where there is a difference it is possible his may be better.

I shall not give the percentage of recoveries I have had in treating pneumonia, for a learned author and professor told me, many years ago, that, "it was not to be expected that a country doctor, who evidently kept his own books, would estimate percentage correctly, and therefore my statistics were absolutely worthless." I do not expect to convert that Professor, nor any other authority, for, doubtless they are convinced that, "we are the people, and wisdom will die with us." But, perhaps, some studious mountaineer, or conscientious, hard-riding, prairie doctor, who has been taught to closely watch the patient and the pneumococcus—or some other "cuss"—fight out the pneumonia while he stands by to "meet the indications as they

arise," and who, if the patient happens to live, piously may give God the glory while he takes the pay, may be induced to abandon his attitude of expectant attention, and by careful, patient, *personal* observation learn the actions both primary and remote of his remedies. And then remembering that "it is a condition, not a theory" he is called to meet, he will take a hand in the fight himself, basing the treatment on common-sense rather than on the teaching of some facile writer whose own statistics show that his success has been no greater, if as great, than it would have been had he sent his patients to bed in a comfortable, well-ventilated room, given to each of them a canteen of water and a box of ship biscuit, and then gone off for a mouth's fishing. Should he thus use his knowledge he will find the period of attention shortened, the death rate decreased and, while he can take the pay with a clear conscience, no small share of the glory will come with it.

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## INFLAMMATORY DISEASES OF THE CERVICAL LYMPHATIC GLANDS.\*

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W. J. MEANS, M.D., COLUMBUS, O.

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Owing to the close relations that the cervical lymphatic glands bear to the important and vital structures passing through the neck and those belonging properly to this region; the frequency of their being diseased, and the immediate and remote results of such diseases, this subject becomes one of special interest to the physician and surgeon. Bound together in the neck in a small compass we find posteriorly the vertebral column enclosing the spinal cord, blood vessels and nerves, air and food passages, muscles, glands, cellular tissues and fasciae. The spinal cord is the only one of these that is well protected and therefore not liable to be involved with diseased lymphatic glands or complicated in the treatment.

A brief description of the topography of the neck and the anatomical arrange-

ment of the glands is necessary before considering the subject proper. I will not mention the different regions and spaces other than to say that the neck forms two irregular quadrilateral spaces, one on either side. These spaces are bounded superiorly by the lines of the lower jaw and mastoid processes and the superior occipital lines to the occipital protuberance; inferiorly by lines extending along the clavicles, the acromion processes and to the spinous process of the seventh cervical vertebra; posteriorly from the spinous process of the seventh cervical vertebra to the occipital protuberance; and anteriorly by the middle line of the neck.

These spaces are divided diagonally by the sterno-mastoid muscle into the posterior and anterior triangles.

Subdivisions of these triangles are further made by anatomists, but aside from the supra-hyoid space they are of little practi-

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cal value to the surgeon. The sternomastoid muscle is the leading guide to many of the important organs. There is perhaps no other portion of the body where the anatomical arrangement of the organs are more constant in their positions than in the neck. Therefore, with a thorough knowledge of the landmarks, the surgeon can operate on glandular enlargements with comparative safety from anomalies. This constancy of the structures of the neck is due largely to the arrangement of the fasciæ. The superficial fascia is continuous with that of the head and trunk and includes the platysma-myoid muscles and the external jugular veins, and is very loose. The deep fascia divides, fixes and binds together the various tissues and organs, and has strong attachments to the transverse processes of the cervical vertebrae. There are some points of great value in connection with the arrangement of the superficial and deep fasciæ in making a diagnosis of tumors in the neck and also in arriving at a prognosis. Glands that are loose and movable are usually confined to the external fascia; when in the deeper fascia, they become fixed. Again, owing to the arrangement of the different sheathes and layers, tumors have a tendency to grow downward. This is especially true of fluid tumors. These observations are not confined to the lymphatic tumors alone. This tendency should always be borne in mind by the surgeon in making a diagnosis of obscure swellings in the neck.

As our subject is confined to the lymphatic glands, a consideration of the anatomy of the neck will not be further necessary, except to give a brief description of these glands. The lymphatics of the neck in their distribution do not vary from the general arrangement in other portions of the body in that there are two sets, superficial and deep. In number they exceed that of any other portion of the body and the deep set are of larger size. The superficial set are found along the external jugular veins between the platysma and the deep fascia. They are most numerous at the base of the posterior triangle. A few small glands are found on the front and sides of the larynx and beneath the mastoid processes. The deep set form an uninterrupted chain along the internal jugular veins and carotid arteries. There can be no correct estimate placed

upon the number of glands in the different groups of the neck.

With these imperfect outlines of the topography of the neck I will now proceed to a consideration of the inflammatory diseases of these glands. The inflammatory diseases in their general features are so well understood that I will not devote much space to a description. Since the management of the different forms is in many instances so radically different, I am compelled, however, to give a classification and a short clinical history of each.

The most practical grand division in the classification of these diseases, is the simple and the specific. The simple variety is perhaps met in children oftener than almost any other disease. In severity, simple adenitis exists from the evanescent swelling of the glands that passes off in a few days, to that of suppuration or chronic enlargement that continues for weeks, causes the patient much trouble and is liable to become specific from secondary infection. The clinical features are so common that it is useless to take our time with an extended description of them. The etiological factors are numerous. Inflammatory processes about the mouth, face, head and ears, such as ulceration of a tooth, stomatitis, tonsilitis or any of the diseases of mucous membranes, eczema of the face or scalp, dermatitis, otitis media, pediculosis capitis, and other diseases too numerous to mention, are frequent causes. The eruption of the teeth, exposure to cold and sprains are all common causes in producing swelling of the cervical glands. The pathological changes that take place are found first in the cortex of the gland. It becomes more vascular, soft and swollen; the reticulum loses its distinctiveness; the lymph passages become packed with lymph. The capillaries become enlarged and the gland becomes a deep purple in color. The termination may be by resolution, chronic enlargement or suppuration. Owing to the inherent power of the glands to throw off foreign bodies and to resist the attacks of invading microbes, a large proportion of them undergo resolution and disappear. When the inflammation becomes chronic there is a failure to absorb the exudates and they become organized. This thickens the capsule and it becomes hard and adherent to the surrounding tissues. In some cases the lymphatic vessels are com-

pressed and there follows dilation of them and edema of the parts. If their termination is by suppuration, the gland itself will be the seat of necrosis, or the tissues surrounding it. If the latter, the gland is often found partially intact in the abscess.

There is always danger of a simple adenitis becoming tubercular. A healthy gland has a resisting power to the growth of tubercle bacilli, but when diseased it very readily becomes a nidus for their cultivation. I do not believe the profession is fully alive to the danger of this source of tubercular infection. Enlarged glands are so frequent, and terminate favorably in so many cases that the physician becomes indifferent to the gravity of them.

Under the specific inflammatory enlargements we have tubercular, syphilitic and glanderous and a few others not necessary to mention. It is now a well established fact that the lymphatic glands all over the body are frequently affected by tuberculosis. The cervical glands are especially prone to be affected, probably owing to the numerous sources of infection about the mouth, face and head. It is claimed that 95 per cent. of all the cases of tubercular adenitis occur in the cervical lymphatic glands. The source of infection is much the same as in the simple variety. There is some abrasion or disintegration of the skin or mucous membrane through which the bacilli gain entrance to the lymphatic vessels and are carried to the gland. The bacillus tuberculosis is non-motile, so this is the only explanation we can give of its entrance and progress. Another clinical fact goes to prove this, in that when a gland belonging to the superficial set becomes infected, others in the same chain become affected. It is so with the deep set. This is most conclusive evidence that the bacilli are carried by the lymph current. In the active stage of the inflammatory process the lymph vessels are sometimes occluded and thus prevent the extension of tubercular infection for the time being. There are some exceptions to this rule of invasion in the direction of the lymph current. These exceptions may be accounted for by the wandering leucocytes, to which the bacilli may become attached. We may note another clinical feature that bears upon the above theory, that as long as the bacilli are confined to the lymphatic glands there

is no danger of general infection, but when they pass these filters and the germ gets into the general circulation there follows general tuberculosis, generally pulmonary. For an extended description of the pathological anatomy I will refer the reader to works on that subject. Suffice it to say that cell necrosis is followed by caseation and the bacilli within these nodules die or become inert and remain frequently for months or years without any signs of activity. During this time the gland is not tender and remains quiescent and gives the patient no particular trouble. The cheesy material may dry and become enclosed in the capsule or connective tissue and remain in calcification, or it may undergo liquefaction.

Secondary infection may take place from pus microbes, when an acute inflammatory process will set up involving the surrounding tissues, followed by suppuration. When a group of glands are diseased the first infected may have undergone the degenerative process above mentioned, while the last ones are simply pinkish and only show the primary stage of the disease. I recently removed from a patient, axillary glands which ranged in size from that of walnut to that of a small almond. They were knotted together by connective tissue and the larger ones had undergone the cheesy degeneration. Liquefaction had not taken place in any of them. Several of them had a few foci of necrotic degeneration, and the smaller did not present any changes further than the hyperemic enlargement.

It occurs to me that a differential diagnosis among the several forms of cervical adenitis is of great importance, and inasmuch as this paper will be of greater length than I intended, I will omit the symptomatology and consider a few of the important clinical features in pointing out the diagnostic points of each kind.

In simple adenitis there is difficulty oftentimes to differentiate the true condition.

Suppurative adenitis is an acute inflammatory process that terminates in a few in pus.

Adenitis developing from a sore about the lips which has the characteristics of a general sore, can be easily differentiated from the simple or tubercular varieties.

In tertiary syphilis the whole glandular system, especially the superficial set, is

affected. The affected glands are painless, indurated and loose in the tissues.

Carcinoma never occurs as a primary affection of the lymphatic glands. When enlargement of glands occurs close to a suspicious tumor, there is not much doubt as to its character.

Lymphoma always affects but one, and the cause is benign.

Lympho-sarcoma gives rise to regional and general infections. In this respect it is like tubercular adenitis, but it is not inflammatory and therefore does not produce degeneration of the tissues.

A prognosis of inflammation of the cervical glands depends largely upon the variety and the management. If left to themselves or treated in an improper manner they become a frequent cause of death. Simple adenitis *per se* is not dangerous, but when we consider the danger of secondary infection from tuberculosis it becomes a grave disease. Local tuberculosis is a constant menace to the life of the patient, and therefore the gravity of tubercular adenitis, in the cervical glands especially, should be recognized. General infection may not occur, but the disease remains there with the wand of death ready to beckon its victim.

The treatment of cervical adenitis, after a careful diagnosis has been made, is important. In the simple variety much can be done to avoid suppuration and secondary infection. One of the cardinal principles in treating adenitis, of whatever kind, is to remove the cause or source of the trouble. When called to see a patient with enlarged cervical glands it is the imperative duty of the physician to carefully examine the mouth, throat, nose, ears and scalp to find the cause of the trouble; and if found, it should be removed. Rest and the application of cold to the swollen glands is about the only treatment necessary following the removal of the cause.

I wish here to protest against the almost universal custom of applying local irritants over swollen glands, such as tincture of iodine, coal oil, etc., etc. I also protest against the indiscriminate use of fomentations. The ancient theory that iodine applied externally causes absorption of exudates or will reduce enlarged glands, seems to be prevalent among physicians of the present day. The external use of tincture of iodine is unsightly, painful,

and may be injurious. Local irritants stimulate the pericellular tissues to a vascular hyperæmia and thus may convert a quiescent enlarged gland into an acute inflammatory action and possible suppuration. Another source of danger may arise from abrasion of the skin so that microbes may find their way into the lymph currents and diseased glands. These restrictions to the use of irritants apply both to the simple and specific varieties of adenitis.

When suppuration has occurred fomentations may take the place of the cold applications. As soon as fluctuation can be detected, a free incision should be made into the pus cavity. The patient should be anæsthetized, and then the abscess can be opened carefully and thoroughly cleaned out. By "cleaning out" I mean curetting and washing with antiseptic solution and then packing with iodoform gauze. If this plan can be followed there will be a speedy recovery with the least possible drain upon the system and little resulting scar. Constitutional treatment is necessary to support the system. I depend upon the lime salts, arsenic and iron. If the suppuration is found to be in the peri-glandular tissues and the gland not fully broken down, which is often the case, it should be removed and the cavity treated in the above manner.

The treatment of the tubercular variety is one of the most interesting and important subjects pertaining to the management of the lymphatic glands. The treatment very naturally resolves itself into two forms—constitutional and local or surgical. Under the constitutional treatment there lurks much danger to the patient. The old idea of the effect of the alterative treatment in scrofula is still abroad in the profession. No one knows what it means, but through ignorance of the action of drugs and the pathology of tubercular adenitis, the physician goes on prescribing nauseating medicines, hoping thereby to cure these local swellings, but his patient goes on toward the grave, or may return to health after months or years of running sores and with hideous scars resulting. The true purpose of constitutional treatment is, or should be, to build up the system. This can best be accomplished with cod-liver oil (pure-emulsions should be discarded), arsenic, iron,

nutritious diet and proper hygienic surroundings. The curative treatment is surgical and should be resorted to at the earliest possible time. On general principles there are no good reasons for delay. Early extirpation of tubercular glands affords as great immunity from subsequent infection as it does in carcinoma. In the face of modern statistics, no one would advise delay in removing a malignant tumor before the surrounding tissues and glands become infected. So it is with tubercular lymphatic glands; if left alone, additional glands become infected; there is constant danger of general infection and there will be more or less peri-cellulitis, thus complicating operative interference. And other complications will arise that will make what primarily would have been a simple surgical operation, one of the most formidable known to surgery, thus jeopardizing the life of the patient.

The surgeon must be thoroughly familiar with the topographical arrangement of the tissues and organs of the neck before he ventures to operate; and must be prepared to meet emergencies of the gravest character. Exercising all the skill and care possible, he will meet with difficulties that will require mature judgement to overcome. I have found it necessary to ligate the jugular vein in two cases, and the external artery in one. These cases presented no unusual features, except that the enlarged glands were closely attached to the vessels by adhesions caused from peri-cellulitis and which could not be diagnosed before the incision was made. In the posterior triangle of the neck, if a tumor is large and with a tendency to grow downward, there is considerable danger from direct infection through the apex of the lung. In one case, operated upon about three years ago, the gland had become quite large and pressed upon the lung in such a way as to produce a severe cough. The tumor was found to be attached to the pleura and subclavian artery and the several cords of the brachial plexus. A subsidence of the cough followed the removal of the tumor, what seemed to be an incipient tuberculosis was fully arrested, and the patient now enjoys perfect health.

There are some important points in the technique of these operations, that should be closely observed:—

1st. The incision through the integument should be large enough to expose

the glands to be removed. By adhering to this rule, many of the accidents referred to will be obviated.

2nd. Never use a cutting instrument if it is possible to avoid it. One of the best instruments for the purpose is the plain curved scissors; the concavity fits nicely over the surface of the tumor and reduces the danger of injury to either the cyst or blood vessels to a minimum. The finger is also an efficient and intelligent dissector, to be used in preference to any other instrument if space will admit of it.

3rd. If suppuration has taken place, the sac should be thoroughly curetted, removing if possible all the diseased tissues, the exposed surfaces should be wiped off with pure carbolic acid and then packed with iodoform gauze. There should be no effort to close the incision by sutures. Tubercle bacilli do not flourish in a dry place; therefore, the wound should be kept as free from secretions as possible. The dressings should be changed every second or third day.

4th. If suppuration has not taken place and the glands can be removed without bursting the sac the incision may be closed without drainage.

5th. It is highly necessary to remove all the glands that can be found in the region infected. The operator will often be surprised at the number affected when he comes to make an examination directly through the wound. One small gland left, if infected, will defeat the object of the operation.

#### CONCLUSIONS:

1. Inflammatory diseases of the cervical lymphatic glands are frequent, and a common source of grave complications.
2. Simple adenitis should receive careful and prompt attention from the physician.
3. Constitutional treatment has no direct influence on these enlarged glands.
4. Irritating local applications are unsightly, painful and a frequent source of secondary infection from pathogenic microbes.
5. The tubercular form frequently leads to general tuberculosis and death, or to chronic suppurating sinuses that continue years and eventually leave disfiguring scars.
6. The early removal of chronically enlarged glands or tubercular glands is followed by greater immunity from return than is the early removal of carcinoma.
7. The operation should be thorough, removing all the glands in the plexus that may be found affected.

## COMPLICATIONS AND SEQUELÆ OF EPIDEMIC INFLUENZA (LA-GRIFFE), AND THEIR PROPHYLAXIS.\*

A. H. HEWITSON, M.D., ST. CLAIRSVILLE, O.

By the title assigned to this paper, we are confined in our treatment of the subject to the complications, sequelæ and prevention of la-gripe. It is, therefore, not germane to our purpose and would require more than the allotted time, to refer to the history, symptoms and treatment of the disease itself. However, to properly apply what we desire to say, it is necessary to refer briefly to the general nature of influenza, and particularly to its pathology as expounded by the best writers and teachers.

A recent writer defines influenza in the following terms: "A specific, epidemic, self-limited, febrile disease, probably" dependent upon a bacillus or microbe. In common with almost all other epidemic diseases, influenza has been in later years subject to the investigations of the noble band of pathologists and bacteriologists who have accomplished so much for scientific medicine. Pfeiffer, as early as 1889 or '90, after very careful investigation, describes specific bacilli found in pure cultures of the bronchial secretions in uncomplicated influenza, which were absent from the sputa of ordinary bronchial catarrh, pneumonia and pulmonary tuberculosis.

I do not purpose to follow the development of this theory as I believe all are more or less familiar with the claims set forth in its behalf. It can not be admitted that the facts claimed are positively proven, nevertheless, in view of the brilliant discoveries of the past decade, we are justified in accepting their conclusions as authoritative. According to this theory, the bacilli or microbes enter the system principally by the mucous membrane of the respiratory organs, and by multiplication and secondary causes accomplish all the phenomena belonging to the disease we are considering.

It is thought by some that numerous bacilli or microbes differing in their na-

ture unite in producing the complicated symptoms and sequelæ which are met with so frequently. Others believe the different complications may be explained by the differences in situation, environment and constitution of those affected. Each patient gives the morbid element a different setting and surrounding. We have all noticed the effect produced by change of combination. The chemist by slightly varying the elements of a mild and innocent substance converts it into virulent poison. The artist adds a few touches of the brush to the canvas and how different the picture. So in disease; one patient is young, another quite aged; one of strong constitution, another always delicate; some live carefully, others recklessly. Each patient presents different physical conditions and when attacked by disease no two individuals manifest exactly the same symptoms.

Apart from all theory, experience proves that there is a marked difference between the same affection occurring as a separate disease and as a complication with la gripe.

Of complications, undoubtedly pneumonia and bronchitis are more often present, but there is a dispute amongst observers as to which of these two occurs the more frequently. A recent French writer believes that the complex pathology of these chest complications is explained by the presence of different microbes in the different forms. There are thus congestive, inflammatory and suppurative pneumonias; those produced by pneumococci and those caused by streptococci.

It is an admitted fact that the virulence of micro-organisms is raised to the highest degree in all forms of influenza and its complications.

I need not dwell long on the management of these particular chest complications. The important duty is to remember the depressing nature of the original affection. Especially remember the importance of sustaining and energizing the cardiac and respiratory nerves. In my

\*Read before the Ohio State Medical Society, 1895.

limited experience I have found nothing that can compare with strychnia and digitalis—full doses of digitalis and much larger than the ordinary dose of strychnia. We are too timid in our dosage of strychnia. In those cases where the influenza is still active I add to the above, fluid extract of aconite in small doses. This may appear heterodox, but I believe it to be a sensible combination. Of course phenacetine and its companions of the coal-tar group, with codeine, may be continued in some cases from the original influenza to the complicating pneumonia and bronchitis. An early recourse should be had to cod-liver oil and syrup of hypophosphites or similar tonic remedies.

Pleuritis is a complication of la grippe which is not very frequent, nor is there any particular management required except to remember the nature of the previous trouble.

A more frequent complication as well as more troublesome, is pleurodynia. In our part of the State it has been of very frequent occurrence the past season. The pain is often severe, resembling pleuritis or pleuro-pneumonia. Pressure along the course of the intercostal nerve will promptly locate the trouble. It is usually located on the left side. Great alarm frequently results from the feeling that the heart is or will be involved. It is not necessary to speak of special forms of treatment for this complication. It is one of the neurotic forms of the disease and yields to the general management which we recommend further on for these conditions. One important duty of the medical attendant is to relieve the mental anxiety by assurance that the heart is in no danger.

At certain times in some epidemics rheumatism is a complication. Da Costa speaks of an experience of this kind occurring to him during the epidemic of '91 and '92.

Disorders of digestion are frequently complications of influenza. They constitute a very troublesome form of the disease to the physician and are the source of exquisite suffering to the patient. Fortunately, however, the stomach is, as a rule, only functionally affected, the disturbance of digestion being due largely to the effects of the general disease upon the nerve centers. The treatment necessarily connects itself with the management of the nervous complications and sequelæ.

We will not take time to consider them separately and will only remark in passing that it is the duty of the physician by the use of the stomach tube and the most painstaking examination, to determine the true state of the digestive functions.

Of complications, we must view those having a nerve origin as the most important and perplexing. Post-mortem examination of a patient who had died of influenza, revealed serious injury to the brain. Althaus, of London, refers to results of a series of eleven post-mortem examinations. In every case intense hyperæmia of the pia mater at the base of the brain was present. The arteries were distended and the consistence of the brain and spinal cord was increased. In two cases, by Furbringer, the autopsy revealed capillary emboli and hemorrhagic foci in the lobes of both hemispheres involving the white and gray substance. Mills, of Philadelphia, classifies the organic nervous lesions occurring in the wake of influenza in the following order: neuritis, meningitis, myelitis and cerebritis. He considers no single affection so common as neuritis, occurring in every form, as to location and diffusion. By some authors meningitis is said to cause more deaths in influenza than heart failure.

In considering the sequelæ of la grippe with reference to the nervous system, we meet a most difficult question, which I shall not attempt to discuss in detail. In some obscure manner, by many complex influences, the essential virus, bacillus or microbe of the influenza undermines the nerve centers, weakens the nerve force and exhausts the vital energies, disturbing the functions of important organs.

To name, number, classify and explain the nervous consequences of la grippe is a task too great to be undertaken. While their number and variety is legion, still we believe a careful consideration will show that they result from the exhaustion of the power of the nerve centers, due to the effect of the essential poison upon nerve structure. Cephalgia, trigeminal neuralgia, insomnia, loss of memory, cardiac weakness, indigestion—in a word, functional derangement of all the organs, can in a vast majority of cases be traced back to a neurotic origin. If a careful examination does not reveal any central cause, then the task may be wonderfully simplified by

regarding all as forms of exhausted nerve force or vital power.

While scientific pharmacy and experimental therapeutics are giving us new remedies monthly, it is our duty to scrutinize them closely and give our patients the benefit of whatever is trustworthy, but at present I do not believe we can do better than place our main reliance upon our friends of other years, strychnia, iron, quinine, cod-liver oil and phosphates.

These cases in their multitudinous characters will afford opportunity for the largest experience, the most profound learning, and the soundest judgment.

There is change of location, out-door life and exercise; there is the rest treatment, massage and electricity.

I wish to name one simple remedy I have found of great benefit, especially in the case of patients in advanced life when the waste products are becoming more and

more retained, the coatings of the vessels filling gradually; in these cases I urge the patients to use hot water freely—to drink all the stomach will retain. It is frequently surprising how soon improvement appears.

The last division of the subject, prophylaxis, will detain us but a few moments. Having applied the teaching of modern scientific hygiene in an intelligent manner to the case, and given careful attention to the mucous lining of the nose and throat, the medical attendant has about performed his duty.

For a scientific prophylaxis we must look to the faithful pathologist and bacteriologist. We have good grounds to hope that at no very distant period the true nature of epidemic influenza will be so settled that in common with many other epidemic diseases it will have to yield to the control of scientific medicine.

### CROUPOUS PNEUMONIA.\*

CHARLES CARY, M.D.,<sup>†</sup> BUFFALO, N. Y.

The case illustrates a clinical type with which one should become perfectly familiar, as it is unusually typical of the disease with which it is connected—so much so that, after seeing a few such specimens, one will often be able to pick out a case without making a physical examination.

The patient is 25 years old, a Swede, by occupation a laborer, unmarried. The family history is negative except that his father died of consumption. The patient has no alcoholic nor specific history, and he was strong till three years ago when he had the grippe which confined him to bed for a week. Eight days ago he took cold but did not pay much attention to it and continued to work throughout the rest of the week, that is from Tuesday to Saturday inclusive. Sunday morning he got up at half-past eight but returned to bed at eleven. Asking him why he

did not remain up, he says, "Sunday, I freeze." This is plain; he had a chill. On further questioning we learn that he did not shake with cold, but that he had a sense of freezing about the lower part of the chest most of the time from Tuesday till Sunday. On Sunday afternoon he developed a sharp pain in the right side, and that same evening he was admitted to the hospital with a pulse of 120, temperature of 104°, and his respirations were 38 to the minute.

Commonly, at this stage of the disease the pain is agonizing, the patient is unable to take a deep breath and the respiration being superficial, is necessarily rapid. The respiration is, generally speaking, more rapid in this disease than in any other, being often half or more than half as rapid as the pulse. Here, with a pulse rate of 120, the respirations were 38; when the pulse fell to 110, the respirations were 40. The patient says that he felt an inclination to cough but that he could not on account of the pain in his

\*Clinical lecture at Buffalo General Hospital.

<sup>†</sup>Professor of Materia Medica and Therapeutics, University of Buffalo.

chest. The temperature to day was  $102^{\circ}$ , and last night it was  $103^{\circ}$ .

The sputum is also quite characteristic. You can see that it is of a dull reddish-brown color and of the consistence of glue, stringing from the cup and receding without breaking when I attempt to stop the flow by tilting the cup. Such sputum is typically so tenacious that it will stick to the bottom of an inverted cup. This test, I am unable to show you, since we always keep some antiseptic liquid in the sputum cups.

We have had this winter in Buffalo, an epidemic of influenza comparatively mild, when we consider the severity of the epidemic in the winter of 1889-90, but not so mild as many of the patients might wish. The papers are full of the occurrence of grippe elsewhere. I believe that this patient had an attack of grippe last week. Grippe is often followed by pneumonia unless the patient takes to his bed and receives proper treatment. The pneumococcus is almost almost present in the mouth and it is largely a question of accident whether it remains as a harmless foreign body or whether it becomes implanted on the soil furnished by the inflammatory process of the influenza.

On percussing over the chest, there is a great difference between the two sides. On the right side, the note is high pitched, rather tympanic and not voluminous. On the left side, the heart interferes with the resonance of the lung tissue so that the comparative difference is not as great as we might expect. There is not as much fremitus over the right lung as over the left. This is not typical, but we must take the physical signs as we find them. Sometimes, on account of pain, the diseased side will be held much more fixed than the other. Sometimes breathing with the diaphragm is less painful than if the intercostal and abdominal muscles are used and, hence, the respiratory movement will be almost entirely limited to the diaphragm. This patient's respiration is largely abdominal, the chest scarcely rising at all. Over the lower lobe of the right lung there is loud tubular breathing accompanied by a rather coarse râle, which is, however, of the nature of a crepitant râle. Day by day there will be a diminution in the tubular element of the breath sound. It is less to-day than yesterday. Still we must consider the

possibility of the invasion of another part of the lung and, if this occurs—I sincerely hope that it will not—you can hear the pneumonic process in its most recent stage. The right lung is recovering so rapidly now, that I think the man would be able to withstand the invasion of another part of the lung, even an entire lobe, if it were delayed a few days.

The general aspect of the patient shows that he is suffering from a serious infectious disease. Notice the characteristic nasal respiration, the alae nasi working with each inspiration, showing that a state of partial suffocation exists.

You will observe that the patient has been cupped, the ecchymotic spots appearing conspicuously but not interfering with the conductivity of the sounds of the lung. I believe that derivative treatment, in the general sense of the word, is excellent. In addition to the use of dry cups, some other milder counter-irritation may be used, and mustard is a good and simple remedy. The bowels should be kept open by salines or a mercurial. It is common practice to give some ammonium preparation with the idea of making the sputum less viscid and capable of expulsion. I believe that opiates are indicated in this disease; not to a degree sufficient to narcotize and render the patient insensible of the need of oxygen, but sufficient to prevent the irritation of the centers on account of the pulmonary inflammation. We should, in general, prevent the excessive working of an inflamed organ. We would protect, involuntarily, any external organ that was involved in an acute inflammation, and I believe it is rational to limit as much as possible the working of the heart or respiratory apparatus under similar conditions of disability.

#### Monuments to Women.

Hitherto in France Joan of Arc has been almost the only woman to mount upon a marble pedestal, but the privilege is being extended. At Vitres a statue is being raised to Mme. de Sevigne, and at Valenciennes a similar honor is in store for Mlle. Duchenois. Apropos of these facts a French writer observes, "Woman being, even in marble, so much more decorative than ourselves, one can only rejoice over the advent of feminine statues."

## COMMUNICATIONS.

## ATONIC DYSPEPSIA.\*

A. L. BENEDICT, A. M., M. D.,<sup>†</sup> BUFFALO, N. Y.

This term, a few years ago in common use, has, in the last two or three years, fallen into reproach as indicating slip-shod methods of diagnosis. At times, when circumstances have prevented thorough investigation and symptoms have pointed plainly to a dyspepsia and to a general loss of tone, the term has almost thrust itself upon me and I have used it apologetically, yet reflection fails to show why an apology was necessary.

So shrewd a clinician as Dr. Wm. Pepper has recognized atonic dyspepsia as a type and has characterized its symptoms as follows: A large, flabby, tooth-marked tongue, not necessarily coated; languid appetite; after eating, a sense of weight referred to the epigastrium; following this, distention of the epigastrium and abdomen from the development of flatus by fermentation of the gastric contents lying too long in the stomach; depending on the flatus, eructations and borborygmus; a sense of heaviness and dulness following meals; a full and often, moderately tender abdomen; sluggish bowels; urine containing an excess of urates; lack of nourishment and, consequently, general enfeeblement and pallor; relaxation and low tone of the whole system, of which the indented tongue is an index.

The protest against the term, atonic dyspepsia, is due to a tendency, excellent in itself, to employ analytical and objective methods of diagnosis. But much may be learned from subjective symptoms, and analysis, to be of practical value, must be followed by synthesis.

It is convenient and abstractly correct to classify functional gastric disturbances into motor, secretory, sensory and absorptive, and to recognize under each head an

elevation or depression of function. But we must not imagine for a moment that we have to deal with eight corresponding types of dyspepsia nor indulge the vain hope of finding remedies whose actions are as delicately shaded as the subtleties of our classification.

The sensibility of the stomach is normally so vague that it can scarcely be below par and, excluding pure neuralgia and hysterical hyperesthesia, an increase of sensibility points to some motor or secretory trouble. Anatomists have discovered no difference between the innervation of the muscular and the glandular elements of the stomach, and we can scarcely imagine a perversion of one function without a similar change in the other. Absorption depends, first, upon perfect digestion; secondly, upon the circulation of blood and lymph; thirdly, upon various mysterious osmotic conditions. It is very questionable if we have any reliable test for absorption further than noting the condition of the stomach contents and the general nutrition. It is certain that we have no means of stimulating absorption without also stimulating secretion and motion. It is altogether likely that absorptive failure does not occur if digestion is perfect.

Dr. Pepper, the master of clinical medicine, although he defines atonic dyspepsia as that form in which the muscular coat is the element affected, immediately contradicts his definition in the typical picture which he draws. The gaseous distention is not due to a paralyzed muscular wall, but to the work of microorganisms of fermentation growing in the absence of hydrochloric acid. The sense of dulness, the loaded urine, the lack of nourishment, and consequent general enfeeblement, are due, not to muscular weakness, but to perversions of secretion and absorption.

Ewald insists on the use of the term *gastriatony* in the limited muscular sense,

\*Read before the Medical Association Central N. Y.

<sup>†</sup>Lecturer on Digestive Diseases, Dental Department University of Buffalo; Consultant in Digestive Diseases Riverside Hospital, Buffalo.

but his brief discussion, from which case reports are conspicuously absent, only confirms the belief that the condition is purely an abstraction or of phenomenal rarity.

If the secretions are perfect, what serious effect can follow from any moderate degree of gastric sluggishness? The time at which the stomach empties itself into the intestine differs widely with individuals and with variations of diet. So long as no chemical indigestion occurs there is no disease. Neither can the lack of churning amount to much if secretion is normal, for thousands of persons in perfect health do not masticate properly, and if the gastric juice can penetrate to the center of an unchewed lump of meat, it can certainly permeate a soft mass with very little aid of muscular contraction.

I believe we may substitute for the complicated classification of gastric neuroses which some authorities have suggested, the very simple one of atonic and irritative types, in which muscular and glandular functions fall or rise together, while the sensibility is merely symptomatic. Occasionally a unique case may arise to justify the more complicated nomenclature.

In atonic dyspepsia there is a diminished secretion of hydrochloric acid, a delayed and insufficient peptonization of proteids, a corresponding delay in absorption, and more or less sluggishness of the gastric muscle, with constipation indicating a similar intestinal weakness.

In the opposite, irritative type, there is an increase in the secretion of hydrochloric acid, an excessive capability for proteid digestion, a delay in the conversion of carbohydrates into maltose because ptyalin digestion is inhibited in highly acid media, more or less complaint of pain, and an irritable muscular wall. This neurosis may culminate in self-digestion of the stomach; in other words, in gastric ulcer.

In the former type, the decrease of hydrochloric acid allows the development of microorganisms, which may produce an excess of lactic, butyric and acetic acids, with gases of fermentation. Such cases, to which the term fermentative dyspepsia is applicable, though essentially atonic and sub-acid, may give rise to many sensory and motor symptoms of irritation. In some of these cases there is a predominance of one kind of ferment. Thus, I have found butyric acid persistently present, along with its cause, the bacillus

butyricus. Some patients, from the relative excess of acetic acid, speak of themselves as vinegar factories. In still other cases lactic acid is in excess, and even when there is no free acid I have often found a marked ferric chlorid test for lactates. I question whether the lactic acid, found as the result of fermentation, is chemically identical with the normal lactic acid of the preliminary stage of digestion. In fact, some recent investigations of Penzoldt have shown the reaction to be so frequently present in healthy persons after various foods and drinks, that it is very questionable whether it is not produced in the absence of lactates and whether it has any clinical significance.

Except in high grades of acute gastritis, in the late stages of chronic catarrh and cancer and, as death approaches, in almost any disease, there is no failure of rennet and pepsin, the unorganized ferments of the stomach. On the other hand, as these ferments act qualitatively rather than quantitatively, we cannot imagine them to be in excess. Thus there is no excuse for giving pepsin except in those cases in which it is far better to administer predigested food.

The ultimate cause of atonic dyspepsia is constitutional depression. It may be due to overwork and especially to prolonged worry. Sometimes the dyspepsia is the first manifestation of tubercular poisoning. Again, there seems to be an inherent failure of the innervation of the digestive organs. Once established, the dyspepsia is, in turn, the cause of loss of strength, of mental inertia and of visceral weakness. Some degree of simple anemia is almost inevitable. The exciting cause may be an illness of any kind, the excessive use of tea, coffee or other beverages, the lack of proper food, some error in habits of eating; often it is not discoverable.

The synopsis of symptoms by Dr. Pepper needs no addition, but the results of physical examination are important. On percussion, or succussion, or by filling the stomach through the tube, dilatation will be found to be absent, though there may be some relaxation and sagging even as low as the umbilicus. Serious disease of the liver, heart and kidneys would point to the probability of gastric catarrh, which would be verified by finding an excess of mucus in the stomach contents. Chemical

examination of the contents is important: in fact, a positive diagnosis of the exact form of dyspepsia can be made in no other way. If only one or two such examinations are to be made, and more are usually unnecessary, it is best to siphon out the stomach contents an hour and a half after the test meal. The preliminary stage of digestion, in which organic acids and carbo-hydrates are normally present, should be completed in an hour, but it is well to allow an half-hour's leeway for the purpose of excluding slight deviations from the normal. A mixed meal of proteids, cooked starch and fat is given, comprised in a broiled steak or chop, dry bread and butter with a glassful of water. Raw starches are excluded, since they are not digested till the intestine is reached. In a normal stomach, at the end of even an hour, this test meal will be well on the way to perfect digestion. The butter and meat fat will be recognized as oil globules without rancidity; the starch will have been converted by ptyalin into maltose and absorbed so that neither starch nor sugar will be present in the filtered stomach contents. This filtrate will also contain some albumin, a good deal of peptone and a moderate amount of propeptone, which is a transition form in the digestion of egg and plant albumin, and here represents the nitrogenous part of wheat. The various organic acids of fermentation will be absent, but there will be a strong hydrochloric acidity.

In the ordinary cases of atonic dyspepsia there will be a moderate degree of acidity, but with hydrochloric acid reduced in quantity, and, in a surprisingly large proportion of cases, the usual test will not reveal it at all. Butyric, acetic and lactic acids, with their microorganisms, will be present. Sometimes there will be no free acid but an abundance of lactates. When there is not a high fermentative acidity there is nothing to prevent the digestion of starches by ptyalin, but the absorptive power of the stomach may be at fault so that sugar will remain after the starch has disappeared. If there is much fermentation, undigested starch will also be present. The albuminoids, instead of showing well-advanced peptonization, will be principally represented by undigested albumin and moderate amounts of propeptone and peptone. But it seems that pepsin and hydrochloric acid,

having once attacked a particle of albumin, digest it pretty thoroughly before they attack other particles, so that the filtrate may not show a conspicuous lack of digestive power, whereas a simple inspection of the stomach contents demonstrates that most of the meat is untouched. Again, an abundance of peptone may mean, not that proteid digestion is good, but that absorption is weak.

The treatment consists in supplying the deficient hydrochloric acid, which is normally present in the proportion of 2:1000; how much is formed altogether we do not know. If we estimate the stomach contents at 500 c. c. (about a pint), the normal amount of hydrochloric acid is 1 gram, corresponding to a dessertspoonful of the officinal dilute acid. Practically, a tenth or twentieth of this dose usually suffices if given at the time when it is most needed, an hour after eating. If a larger quantity is necessary, it should be given in divided doses, well diluted, sipped at intervals of a few minutes, beginning three-quarters of an hour after eating. The administration of pepsin is a confession of ignorance. The patient should be urged to take common salt in abundance, since it is from chlorids that hydrochloric acid is formed.

To stimulate motor, secretory and absorptive activity, the simple bitters may be used, but I prefer strychnine in two milligram doses, given before meals in tablet and swallowed quickly to avoid the taste. Hot water is also an excellent stimulant, and it may be used to wash down the strychnine, or, if the latter is not used, a weak, hot soda solution may be given to excite the opposing acid secretion and to dissolve the mucus in those cases in which an essentially functional indigestion has caused a slight catarrh. Strychnine and hydrochloric acid are usually sufficiently antiseptic to relieve any moderate degree of fermentation. If necessary, resorcin, menthol, salol, etc., may be used. I should like to urge again the use of an oily solution of menthol sprayed through the stomach tube. This treatment, which I first reported in 1892, I have found especially adapted to gastric catarrh and atonic dyspepsia with fermentation. If there is intestinal atony as well as gastric, cascara sagrada may be added to the hydrochloric acid. I do not believe in restricting the diet to any great extent; it

is our business not to reduce the food to the capabilities of the stomach, but to raise the digestive power to the demands of ordinary diet. Tea, coffee and coarse vegetables should, however, be interdicted. Iron and arsenic are usually indicated as

general tonics, but often forbidden by the condition of the stomach. Reduced iron, the carbonate or other mild preparations should be preferred. Ordinary hygienic vigilance must be observed.

### OCCIPITO-POSTERIOR POSITIONS.\*

P. W. VAN PEYMA, M. D.,<sup>†</sup> BUFFALO, N. Y.

My own experience and that of several of my colleagues, as well as the varying and often contradictory views expressed by writers on obstetrics, lead me to the conviction that the treatment of occipito-posterior positions is a subject which merits further attention.

The comparative frequency of the occurrence of this variety of vertex presentations adds to the importance of this subject. While different statistics naturally vary somewhat, it is generally admitted that fully one-fourth originally present with the occiput posteriorly to a greater or less degree.

Unscientific obstetrics, as practised in these cases, leads to many deplorable results. Penrose says: "If I were to be asked what one obstetric difficulty, in my experience, had caused most maternal and fetal deaths, what one had caused most maternal and fetal accidents, not necessarily fatal,—accidents, however, often making the rest of life worthless, or still worse than worthless, a tragedy,—I think I would say occipito-posterior positions where the occiput had rotated into the hollow of the sacrum, and which had been *improperly treated*." My own observation warrants similar conclusions.

Proper treatment presupposes and demands correct diagnosis. The early diagnosis of the condition is not only of vital importance, but is also often difficult. The determination of the various positions of the vertex by a recognition of the fontanelles and sutures, implies a practical

knowledge not easily acquired. As a consequence the average physician continues to apply the forceps in protracted cases of this kind, regardless of the position, and as though the head were a perfect sphere and the pelvis a perfect circle. Naturally we find that, in numerous instances, the head is drawn through with the occiput posteriorly, where, if the case had received intelligent treatment, or even had been left to nature, anterior rotation would have been obtained with a more favorable result for both mother and child.

I desire here to call attention to the triangular depression presented by the occipital bone, when, as a result of intrapelvic pressure, it is overlapped by the edges of the parietal bones, as being, perhaps, the most characteristic landmark presented by the vertex. In consequence of the varying relation of the body to the head, as well as on account of the inherent difficulties of the method, external abdominal examination is often unsatisfactory. In rare cases it may be necessary to reach an ear, or even the face, in order to arrive at a positive diagnosis.

Regarding the nature of these cases, there can scarcely be any doubt that the large majority should be considered as normal presentations, in which nature is entirely adequate to effect a normal delivery. A very great proportion of these eventually result in forward rotation of the occiput. According to Kehrer, quoted by Schröder, only one vertex in seventy-five is delivered with the occiput posteriorly. Considering this fact in connection with the fact already referred to, that at least one in four vertex presentations originally presents with the occiput pos-

\*Read before the Medical Association of Central N. Y.

<sup>†</sup>Adjunct Professor of Obstetrics, University of Buffalo; Obstetrician to the Buffalo General and Erie County Hospital.

teriorly, we see that only about one in twenty fails to rotate normally. American statistics give rather less favorable results. This I am inclined to attribute to the greater tendency in this country to interfere—to the earlier and more frequent employment of the forceps.

Forward rotation, or its failure, depends upon many circumstances. With pronounced flexion, strong pains, a normal perineum and the head and pelvis of normal size and shape, we can confidently look forward to natural rotation. In proportion as these conditions are lacking, will the frequency of failure increase. Many cases occurring in my own practice might be cited to illustrate these statements, which are also in accordance with the views expressed by many writers. And yet, while it is maintained that the majority of these cases run a normal course, it cannot be denied that, as a rule, they are unusually protracted and also not rarely call for intelligent intervention. The less easy adaptation of the larger occipital end to the comparatively smaller posterior lateral portion of the inlet, the greater rotation required and the reversed leverage through which the *vis a tergo* is applied, are the more important factors which account for the frequent delays, trying to both patient and accoucheur.

The treatment which may be required varies, naturally, with the stage of labor. The general rule, to maintain the membranes intact during the first stage, applied here with unusual force. Postural treatment, recommended by Reynolds and others, in the expectation of effecting rotation by the force of gravity, has not, in my experience, been very successful. Objections to it are that, if long continued, it causes exhaustion of the patient, and that by calling her attention to the irregular condition it also affects unfavorably her morale. The mental state of the patient is a factor of great importance and one quite frequently underrated or entirely ignored. In arriving at a conclusion as to the necessity for active interference, many circumstances require consideration. Assuming that the circumstances are otherwise normal, we shall do well to leave the case to nature so long as fetal heart-sounds are strong and regular and we have the confidence and co-operation of the mother, the latter based on a good physical and mental state. If, however, the

case becomes unduly prolonged and the condition of fetus, or mother, or both, demands interference, it will often be found that the indication is fulfilled by effecting and maintaining more pronounced flexion. The importance of complete flexion depends upon the well-known fact that the lowest point, in this case the occiput, is naturally deflected forward. Flexion may sometimes be brought about by upward pressure, especially during a pain, with the tips of one or more fingers upon the forehead. This procedure may sometimes be advantageously supplemented by external pressure upon the body of the fetus with the other hand. According to my experience this method is less positive in its results, especially when the head is still but little engaged, than it has been made to appear by many writers on obstetrics. On the other hand I have been much impressed with the mobility of the head, even when well advanced into the excavation, if the patient be thoroughly anesthetized. If the former procedure fails to accomplish its object, the patient may be anesthetized and the rectification effected by means of the whole hand. The use of the vectis, or of one blade of the forceps, I have found useful in certain cases. If, by means of the finger tips, flexion is not accomplished; or, if having been obtained, partial extension reoccurs; or, if with complete flexion there is no advance, then more active interference is proper—is, in fact, demanded.

Under these circumstances the patient should be completely anesthetized, the whole hand introduced and partial rotation of the occiput effected, following which the forceps may be applied advantageously, less for the purpose of immediate traction than to maintain the position of the head. It may even be a question whether this is not the proper treatment when it has become necessary to introduce the whole hand, rather than to limit the operation, as has just been explained, in certain cases to the production of flexion.

Podalic version is an alternative which naturally presents itself for consideration. I am satisfied that, except in cases demanding rapid extraction, version by the feet cannot compete with the procedure described. In addition to the conditions commonly enumerated as more or less contra-indicating podalic version and mak-

ing it dangerous for either mother or child, primiparity should also be considered, especially in its relation to fetal mortality by its interference with rapid extraction of the head.

In the application of the forceps following partial rotation, it may frequently be well to rest satisfied with an approximately correct relation of the blades to the head, to be followed by a more perfect re-application after the head has descended and rotation also, perhaps, further advanced.

The application of the forceps without previous rotation and with tips to forehead in the expectation that the occiput will rotate posteriorly, should be avoided wherever possible and limited to those cases where the head is so deeply and firmly engaged that rectification is impossible or dangerous.

The application of the forceps reversed to the occiput, thereby producing flexion, I have never tried. The procedure is one, probably, rarely to be preferred.

Where the circumstances demand the application of the forceps, with the occiput posteriorly, the blades should be applied rather farther back than in occiput anterior positions, the object being here, as in face presentation with the chin anteriorly, to obtain a larger and firmer hold. The handles will, therefore, be less depressed in these cases. Tractions, under these circumstances, should be backward according to the axes of the succeeding planes until the head reaches the perineum, then sharply forward, using the symphysis as a fulcrum, maintaining extreme flexion until the perineum slips over the occiput when the handles are suddenly dropped and the forceps removed.

This condition is the analogue of face presentations with the chin backward. In both, the presenting part must travel a long distance before the mass engaged can be resolved—in the one instance by extension, in the other by flexion—into its component factors, the head and trunk. Necessarily the dangers to both mother and child are greatly increased.

In conclusion, I desire to emphasize the vital importance of recognizing the position in vertex presentations. To insist that, as a rule, cases of occipito-posterior position should be left for the natural forces to effect delivery—forces which, in the vast majority of cases, are not only entirely inadequate, but in these

cases will accomplish the object better than the most skilled instrumental or manual interference.

Further, I desire to maintain that flexion is essential to natural rotation; that rotation is frequently delayed until the head is very low; that the character of the pains is a very important factor; that with complete anesthesia the mobility of the head, even when deep in the excavation, is often quite surprising; that in occipito-posterior position the blades of the forceps must be applied well forward to insure a firm hold; and that, after the head reaches the perineum, extreme flexion must be maintained until the occiput has passed over the perineum; and, lastly, that no hard and fast rules can be formulated to cover all cases, but that much must necessarily be left to the judgment of the operator, based on a consideration of all the conditions involved.

#### Indications for the Use of Sulfonal.

Among the hypnotics brought before the profession within the last few years, two, Sulfonal and Trional, have been received with much favor. After careful trial each was found to have its own field of usefulness in the treatment of the various forms of insomnia. Of course it is not always possible in any case to foretell with certainty which one of these is likely to prove of most study, although a knowledge of their physiological action throws much light on this subject. Trional acts more promptly, but its effects are dissipated more rapidly, so that the action of one dose is less apt to be prolonged over the following night than in the case of Sulfonal. On the other hand, drowsiness on awaking is more common with the latter. On the ground of comparative study Dr. S. G. Webber (*Boston Medical and Surgical Journal*, May 23d, 1895) recommends Sulfonal especially for that class of patients who have no difficulty in going to sleep when they first go to bed, but wake in a short time and lie awake two, three or four hours, or may have no more sleep that night. In these cases Sulfonal does not interfere with the first early sleep of the night, and acts later, so that the patient does not wake at midnight as usual. Given in small doses, not more than five grains, he has also employed it with advantage to quiet restlessness in neurasthenia, hysteria and mania.

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HAROLD H. KYNNETT, A.M., M.D.  
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SATURDAY, JULY 27, 1895.

## EDITORIAL.

### THE IMMEDIATE CARE OF PERSONS FOUND UNCONSCIOUS ON THE STREETS.

It is not unusual to see in the daily papers as an item of news, an account of some person found unconscious on the streets of a city, whom the police have arrested and locked up on the charge of being "drunk and disorderly" only to find out subsequently, and generally too late to remedy the mistake, that the prisoner was unconscious from some injury or illness and not at all drunk. The incident is of course used to adorn a tale of the ignorance, the carelessness, the brutality, or all three, of the police force, and to point a moral from the dangers of delay in applying suggested remedies. All of which is forgotten until a similar accident affords an opportunity to fill more or less space in the news columns.

It is a shameful commentary on the humanity of nineteenth century civilization that one sick and unfortunate if rendered absolutely helpless through lapse of consciousness in any civilized community,

even though the individual be unknown, should be liable to the pains and penalties awarded a common drunkard. The fault however does not lie with the ordinary police officer nor even with his immediate superiors, but altogether with the governing powers of the municipality. It is no excuse to admit that of persons found unconscious in the street, nine out of every ten are dead-drunk; nor to allege that if experienced medical men are not always able to determine at sight the cause of unconsciousness much less can the ordinary patrolman be expected to discriminate. Neither is the situation relieved by the fact that the alcoholic is unworthy to receive the ministrations of benevolence designed for the relief of the sick and unfortunate, and that hospitals dependent upon charitable contributions are justified in refusing to divert from their intended application their meagre funds for the purpose of affording the drunkard expensive

accommodations for recovery from a debauch.

It would seem that such a blunder, a blunder which amounts to a crime, could easily be avoided in any one of a number of practical ways. The Medical Society of the County of Kings took the matter into consideration a year or more ago and appointed a committee "to report to the society what means have been provided in the city of Brooklyn for the immediate care of persons found unconscious on the streets." The committee made report, and was authorized to issue a circular, in which should be embodied its recommendations, and to send the same to the medical journals, to the managers of the different hospitals of the city, and to such other organizations as it might deem wise.

In accordance with these instructions, the committee prepared the following circular, which it recommends to the consideration of the members of all medical societies, as being largely instrumental in shaping public opinion; to Health Boards, as being the power appointing in many instances ambulance surgeons; to managers of hospitals, as having in some measure the same appointing power, and especially as being the authorities receiving and caring for accident cases; and to the police authorities, who are principally instrumental in summoning aid for those who are injured or taken ill in the streets.

#### RECOMMENDATIONS.

1. Whenever a person is found in an unconscious or semi-conscious state on the street, or elsewhere, away from his own home, the police, when notified of such case, shall immediately summon medical aid; sending for the ambulance surgeon, or for the police surgeon; or in towns, where there are no such officials, then for the nearest physician, who should be compensated for his services by the authorities.

2. The police shall not decide as to the disposition of such a case, but must await the decision of the ambulance surgeon, police surgeon, or of the physician called, and must act in accordance with such de-

cision.

3. A police officer who acts in opposition to such decision should be by the ambulance surgeon, police surgeon, or the physician, reported to the Police Commissioner, who should subject such officer to discipline, rules governing such cases having previously been made and promulgated.

4. Ambulance surgeons should give prompt and immediate aid to patients found in the condition hitherto described, and remove them to the nearest hospital, or to their homes when ascertainable, according as their judgment dictates is the best course to pursue in the interest of the patients. The existence of an alcoholic complication in the case should in nowise adversely influence the surgeon or physician called as to the disposition of the case, as such a complication often renders skillful medical treatment the more imperative.

5. Ambulance surgeons, and other medical men, brought in contact with cases in which alcoholism is a frequent complication, should be reminded that this condition often renders an immediate diagnosis impossible in the most serious and oftentimes fatal forms of cerebral disease and injury, as well as in other diseased conditions.

6. The examination of ambulance surgeons should include the differential diagnosis of alcoholic coma from other forms of coma, and the various diseases or injuries that may produce a condition simulating alcoholic intoxication.

7. Hospital authorities receiving financial aid from the city should not refuse admittance to patients suffering from supposed alcoholism, for in so doing they are liable to be contributory to the death of such patients. They should know, that if the condition be one of uncomplicated alcoholism, this fact will in a short time be revealed, and other disposition may be subsequently made of the case; while, if the patient is so affected as to need immediate and skillful treatment, his rejection by the hospital authorities may conduce to a fatal result. If they refuse to receive such cases, because complicated with alcoholism, they should be held legally responsible for the results. And, further, if such refusal is persistent after their attention has been called to the matter, the city authorities should strike the

name of such hospital from its list of beneficiaries.

8. The municipal authorities should also consider the question of the establishment of a special emergency hospital, or hospitals, conveniently located with reference to the various districts of the city; or a system, similar to that of the Bureau d'Admission in Paris, connected with which there is a special hospital for all cases of alcoholism, or cases complicated with alcoholism, that may occur in the streets of that city. Or, the authorities might consider the establishment of a special department in connection with the hospitals of the city, similar to the "Alcoholic Wards" of Bellevue Hospital, New York, where more than 4,000 alcoholics are annually treated. Such a plan would relieve the general hospitals of the burden of such cases, or compel them to make special provision for their care. Should the existing methods prove inadequate, the Committee recommends some such plan as is here outlined.

It is the hope of the Committee, now that the attention of all concerned has been specifically called to the matter, that they will co-operate in such a manner, by adopting rules and otherwise, so that methods will prevail in Brooklyn and

other cities in the management of cases of the nature described, such as exist in most European cities. If this is done, then persons who are rendered unconscious from any cause on the streets or elsewhere, will receive prompt medical and humane treatment, and will escape the danger of being thrust in a cell as "drunks," and there left to sleep off the supposed debauch, which in no inconsiderable number of cases has proved to be "a sleep that knows no waking."

The recommendations of this circular are in keeping with the spirit of the resolutions already adopted by the Medical Society of the County of Kings, and with the practice pursued in the principal cities of Europe. No attempt has been made to treat the subject exhaustively, or to give in detail rules and regulations, which can only be done by the respective authorities of a municipality. It is hoped, that wherever a similar defect exists, similar remedies will be applied. We invite the aid of medical societies and the medical and secular press in procuring the desired reformation.

## ABSTRACTS.

### APPENDICITIS—GENERAL CONSIDERATIONS.

Dr. George R. Fowler, in a lecture delivered at the New York Polyclinic says: In taking up the subject of appendicitis, let us begin at the beginning as nearly as possible, by briefly considering the anatomy of the parts concerned in the disease. The *caput coli* is the initial portion of the colon, and that portion of it which lies below the level of the ileocecal valve is known as the *cæcum*. This is a rounded-out pouch, its transverse diameter being about three inches, and its vertical diameter about two and one-half inches. Early in intra-uterine life, it is located behind the umbilicus. There is a surgical im-

portance to this fact, as we shall see later on. About the sixth week of foetal life it descends in a right oblique direction, until it finally reaches the right iliac fossa. Sometimes it overhangs the brim of the pelvis, and is located to the inner side of iliac vessels, in which case it is beyond the right iliac fossa and nearer to the median line. Its direction is somewhat oblique, as a usual thing, but this is governed to some extent by whether it is full or empty. When it is empty it assumes the vertical direction, and when it is full it is more oblique. The ascending colon and the *cæcum* are marked by peculiar bands,

three in number, one located almost posteriorly, the second latero-posteriorly, and the third anteriorly. These fibrous bands seem to be placed there for the purpose of increasing the capacity of the colon without increasing its length, because you know that the colon at this point seems to be made up of a number of sacculations, communicating with each other, and held together by these longitudinal bands. The cæcum itself is round, like the large intestine, and upon its mucous surface there are open and closed follicles.

The vermiform appendix is attached to the lower part of the cæcum, of which it is apparently an undeveloped remnant. Early in uterine life, the appendix, cæcum and large intestine are one simple tube. The glandular structures of the appendix are precisely similar to those of the cæcum, although they occupy a much smaller area in proportion to their number. That is to say, they are crowded more closely together.

The appendix is made up, in a general way, of the same character of structures as compose the colon and cæcum; these consisting from without inwards, of (1), a peritoneal investment; (2), a longitudinal nonstriated coat; (3), a circular coat, with muscular fibres and sub-mucous and mucous membrane. In the connective tissue beneath the mucosa there are developed a number of closed follicles, and in addition to these, a varying quantity of adenoid tissue, that peculiar tissue composing certain structures which in all probability have in the process of evolution long since ceased to possess any function. For example, you will recall the fact that in the throat there are certain functionless structures, namely, the tonsils, which are composed of adenoid tissue. The peculiarity of this tissue is, that it possesses a very slight amount of vital resistance compared with structures which possess a function. In the sub-mucosa of the appendix, adenoid tissue is so frequently found that its presence is considered typical of appendicular structures. It sometimes is present in such large quantities as to force the mucous membrane towards the lumen of the appendix, producing little irregular elevations upon the mucous surface. In the appendix also will be found the characteristic mucous follicles. The appendix, in many instances, is largely muscular, yet the circu-

lar muscular fibres are often entirely absent. Austin Flint is responsible for the statement, that there are no circular muscular fibres in the appendix; others assert that circular muscular fibres are present. In some cases which I have investigated I have found the circular muscular fibres present, and in other cases absent. Probably, in the majority of cases, some are present. The discussion of this question is interesting to us at this time, from the fact that Talamon, a French writer, makes the assertion that the first symptom of appendicitis, namely, the colicky pains radiating through the abdominal region, are due to the effort on the part of the appendix to expel, through the action of the circular fibres, fecal matter which has found its way into the lumen of the appendage. I have frequently operated for appendicitis in cases in which, although the characteristic pains were present, no fecal matter in the appendix could be found. Furthermore, I have in some instances found a stenosis existing under these circumstances which would have absolutely prevented the return of any fecal matter from the interior of the appendix into the cæcum. Another explanation of the colic, based upon the assumption that the circular fibres are present, is that the effort on the part of the enterolith to gain access to the appendix is resented, and that the pain is the result of the contraction of those fibres. I believe that this explanation is purely fanciful. The longitudinal fibres in the appendix are very scanty. They are of the non-striated variety, and evidently have no special function or importance in the production of the disease. The peritoneal investment of the appendix is of the greatest interest to surgeons. In about fifty per cent. of the cases, the peritoneal investment is such as to completely cover the appendix like the finger of a glove covers the finger. Or this may not be so complete, and the appendix, lying upon the iliac fascia, may be but one-half or three-quarters or four-fifths covered by this investing serosa. In other instances it is entirely extra-peritoneal, being located in the connective tissue behind the peritoneum, and acting as a sort of anchorage for that portion of the colon to which it is attached. In about eighty per cent. of cases it possesses a mesentery of its own. It may be but partly covered by

peritoneum and yet possess a mesentery. This mesentery has its point of attachment on one side of the last portion of the ileum as it enters the ileo-cæcal valve; another angle of this triangular meso-appendix is attached to the appendix itself, and the third angle is represented by a free border. This free border is curved and, practically speaking, ends near the termination of the appendix itself; from this point on to the tip a little fringe is usually present. The blood-supply of the appendix is of some importance. The small loops which are derived from the ileo-colic vessels meet and form a proper appendicular artery, which passes along the mesentery on its free border and gives off three or more vessels to the appendix itself. In the female, there is a slip of peritoneum which passes from the broad ligament to the mesentery of the appendix, and is called the appendiculo-ovarian ligament. This fact is of importance, because until the existence of this ligament with its increased blood-supply, was discovered, it was difficult to account for the fact that eighty per cent. of the cases of appendicitis occur in males, and twenty per cent. in females. You will readily appreciate the fact that in an organ of this character, which is but slightly endowed with vital resistance, made up of structures which have long ceased to possess a function and which are undergoing a process of retro-metamorphosis—that in such an organ a diminution in the blood-supply by establishing a *locus minoris resistentia* will govern in a large measure the accidental occurrence of inflammatory changes.

The attachment of the mesentery to the appendix is not always in a straight line, and the several portions of this three-cornered web are not always of the same length; therefore it follows that the appendix, which is quite movable in the peritoneal cavity, instead of falling in a straight line, may be of a periwinkle or cork-screw shape, because of the shortening of different portions of the mesentery. This curature or angulation of the appendix may interfere with the blood-supply of the organ, resulting in rapid inflammatory changes, ulceration and gangrene.

The direction of the appendix is of some importance. The symptoms of the disease are sometimes largely governed by the direction in which the appendage lies.

Generally speaking, it will have one of four cardinal directions, with perhaps some slight modifications. It may pass directly upwards, behind the colon, or to its outer wall. Or it may have a directly opposite direction, hanging downward over the brim of the pelvis. Again, it may pass across the median line and the iliac vessels, with its tip lying in the left iliac fossa. Lastly, it may pass directly outwards towards the brim of the pelvis and anterior superior spinous process. From these four cardinal points there may be numerous slight modifications. This mobility of the appendix and the constantly changing position of the colon itself, accounts for the fact that in certain cases of recurrent appendicitis, the tenderness in one attack is in one portion of the iliac fossa, while in another attack it is in another portion. These modifications involve some points of clinical interest. For example, when the appendix passes from its attachment at the cæcum towards the ileum it may become wrapped around the last coil of ileum and produce intestinal obstruction. Again, it may pass directly across the iliac vessels, and by infection of the veins give rise to phlebitis with thrombo-stasis, and oedema of one or both lower extremities. Again, it may pass down between the rectum and bladder and give rise to paracystitis or pericystitis. It may pass upwards alongside of the colon in the direction of the liver, and give rise to symptoms, which, from the location of the pain and tenderness, suggest the possibility of the existence of an inflammatory condition of the gall bladder, or the liver itself with hepatic abscess.

Affections of the appendix in former times were known as typhlitis (inflammation of the cæcum), and as paratyphlitis (inflammation of the connective tissue about the cæcum), and perityphlitis, or an inflammatory condition of the serous covering of the appendix. Inflammation of the connective tissue about an appendix extraperitoneally placed is of considerable importance. This tissue rests upon the iliac fascia, which limits the iliac fossa posteriorly: through it pass the iliac vessels, and in front of it is the peritoneum. This connective tissue assumes considerable importance from a clinical standpoint in those patients in whom the appendix lies within the connective tissue itself, because when it is

thus located, the first symptom will not be the lancinating pains due to peritoneal involvement, as in cases where the appendix is freely movable in the peritoneal cavity. This connective tissue is not as sensitive as peritoneum, and inflammatory conditions limited to it may go on to the formation of an abscess without giving rise to colicky pains. Probably many of the so-called cases of peri-nephritic abscess of the older writers where the results of an infection of the connective tissue behind the peritoneum, and that the source of this infection was the appendix. I also believe that many dorso-lumbar abscesses of obscure origin are due to infection from the appendix. The course pursued by these inflammatory processes is oft-times interesting. The abscess may burrow its way along the iliac vessels and point at the crural arch. Or it may find its way down to the crural arch, and then crowd the transversalis fascia forward; the peritoneum is forced upward, and an extra-peritoneum abscess is formed. This is the "iliac phlegmon" described many years ago. The suppurative process may extend into the dorsal region; I have seen instances where abscesses which had their origin in the region of the appendix pointed at the angle of the scapula.

The inflammatory lesions of the appendix were first described by Grisolle, in France, in 1839. About the same time a pathologist of Bonn, Albers, described typhlitis and peri-typhlitis, and asserted that these affections had their origin, as the name implied, in the cæcum or the structures surrounding it. Grisolle, however, at that time made the assertion that these iliac phlegmons had their origin in the appendix itself. Later on, Reginald Fitz undertook to investigate in the dead-house the causes of suppurative lesions in the right iliac fossa, and his researches led him to believe that they had their origin in the appendix, and not in the cæcum or its surrounding tissues. Following this came the experiences of McBurney, Bull and Weir, who, acting on Fitz's observations and investigations, undertook to operate early in these cases, before an appreciable abscess had formed; as the result of the combined work of the pathologist and of the surgeon the true nature of the disease was disclosed.

*Etiology.*—The etiology of appendicitis is a question of some importance and of

considerable interest. It is not very long ago since every child was taught to eject the seeds of grapes, oranges, etc., lest they be caught in this little death trap, the appendix, and give rise to inflammation. This theory probably had its origin in the fact that the bits of hardened fecal material which were removed in the course of operations for iliac phlegmon closely resembled fruit seeds. I am convinced, however, that these very rarely give rise to appendicitis. In upwards of three hundred operations for this disease I have never seen but one foreign body which could be properly held responsible for the inflammatory process, and that was a gall stone; in this case the stone had not really entered the appendix, but had become lodged at its orifice and given rise to pressure at this point which interfered with the nutrition of the appendix and producing sloughing. I do not wish to say that foreign bodies never give rise to appendicitis, but I do believe that such a cause is very exceptional. The entrance of hardened fecal matter into the appendix has also been held responsible for the occurrence of this disease. Such cases, I think, are also exceptional. Upon one occasion I found a genuine enterolith in the appendix, made up of lime salts and secretions, and composed of concentric layers successively deposited until it reached the size of a common lead pencil.

The etiology of appendicitis, according to the latest views of the subject, first takes into consideration the fact that the organ is undoubtedly a vestigial structure possessing a very low degree of vital resistance, and for this reason it readily becomes the seat of inflammatory and ulcerative changes. Furthermore, that its blood-supply, in the male at least, depends upon a single branch made up by anastomoses from the colic arteries, and that this is sometimes insufficient to maintain the vitality of the organ. Furthermore, that slight changes in the trophic nerves which accompany these vessels are sufficient to lead to rapid inflammatory changes in an organ without function, and which is undergoing retrogressive changes. It is not considered necessary that a fruit-seed find entrance to the lumen of the appendix in order that appendicitis should occur, although the presence of such a seed or of an enterolith could easily give rise to the disease by

exerting pressure upon the mucous membrane and thus producing necrotic changes.

The appendix itself contains the same micro-organisms that are found in the intestinal canal. The *bacterium coli communis*, the natural habitat of which is the intestinal canal, may, under extraordinary conditions, become the source of a widespread infective process. It has been found in hepatic abscesses, in inflammation of the gall bladder, in purulent cystitis, and in abscesses in the brain. It has been invariably found in the purulent deposits about an inflamed appendix, in abscess cavities in the walls of the appendix, and in the mucous and sub mucous

tissues. The *diplococcus lanceolatus* is also found, as well as that peculiar micro-organism which gives rise to the fetid odor of pus accumulations anywhere in the abdominal region where the intestinal walls come in contact with the abscess cavity, namely, the *bacillus pyogenes fetidis*. The process of infection takes place in the sub-mucous connective tissue. It then extends to the wall of the appendix, from which it is carried into the peritoneal cavity, or, if the appendix is surrounded by adhesions, into the mass of adhesions themselves. In the first instance it will give rise to suppurating appendicitis, and in the latter to appendicular abscess.—*New York Polyclinic*.

#### THE TREATMENT OF CHRONIC HEART DISEASE BY THE SCHOTT METHOD.

The Schott treatment consists of baths containing various mineral substances and free carbonic-acid gas in solution, and of a series of graduated gentle exercises or gymnastics. The patient begins with a bath containing 1 per cent. of chloride of sodium and 1 per 1000 of chloride of calcium, freed from carbonic-acid, gas at a temperature of 92° to 95° F. (33.3° to 35° C.), and lasting from six to eight minutes. As time goes on the proportion of solids and the duration of the bath should gradually be increased and the temperature gradually lowered, until eventually baths containing free carbonic-acid gas and the full amount of mineral constituents are taken.

Dr. Schott believes that the chlorides of sodium and calcium and the carbonic-acid gas passing through the epidermis stimulate the sensory nerve-endings and, by a reflex action on the cardiac nerves and muscle, cause the heart to beat more forcibly and less rapidly. This, however, does not seem sufficient to explain the diminution in size of the heart in cases of cardiac dilatation. It is probable that in such cases the dilatation of the cutaneous vessels, whether by the warmth of the water in the weaker baths or by the action of the salts and bubbles of carbonic-acid gas in the others, causes a lowering of tension

in the peripheral circulation, so that the heart has less resistance to contend against. Secondly, the flow of blood to the skin thus determined tends to empty the left ventricle and enable it to contract down more fully and completely on its contents.

Dr. Schott has given directions for the preparation of these artificial Nauheim baths, the essential ingredients of which he considers to be chloride of sodium and chloride of calcium, and, later in the treatment, free carbonic-acid gas. To make the weakest bath, containing about 1 per cent. of chloride of sodium and 1 per 1000 of chloride of calcium, one may take 4 pounds (1.8 kilogrammes) of common salt and one-tenth of that quantity of chloride of calcium to 40 gallons (160 litres) of water. These proportions may be gradually increased, as may seem desirable, up to three times that amount. Ordinary sea-water contains about 2.7 per cent. of chloride of sodium, and is thus nearly as rich in this constituent as the Nauheim waters. It does not, however, contain any chloride of calcium. If the right proportion of this salt were added to the bath, there seems to be no reason why sea-water should not be as efficacious as the Nauheim waters; and it should be superior to an artificially-prepared bath.

It could easily be diluted so as to contain 1 per cent. of salt for the commencement of the treatment. For the production of carbonic-acid gas bicarbonate of soda and hydrochloric acid may be used. Thus, for a bath of 40 gallons (160 litres) one may take about 6 ounces (186 grammes) of bicarbonate of soda and seven ounces (217 grammes) of hydrochloric acid of B.P. strength to begin with. This would leave an excess of alkali. These quantities may be increased according as it is thought advisable to increase the proportion of gas in the water; so that five or ten times that amount of each may be used eventually. It is best to dissolve the bicarbonate of soda in the bath first and add the acid a few minutes before the bath is taken, stirring energetically. The evolution of gas will continue some five to fifteen minutes, as it takes some time for all the acid and alkalai to come into contact in this volume of water. A pint ( $\frac{1}{4}$  litre) of water is said to dissolve 16 grains (1.04 grammes) of carbonic-acid gas. Hence, to saturate 40 gallons (160 litres) of water about  $1\frac{1}{2}$  pounds (750 grammes) of bicarbonate of soda and  $2\frac{1}{2}$  pounds (1250 grammes) of hydrochloric acid would be required, calculating from the atomic weights; but, as this would be too large a quantity to use for practical purposes, and the gas would be given off too quickly, it would be better, where it is desired to have a large amount of carbonic acid in the water to make use of the cylinders of the compressed gas, and allow it to pass through the water in the quantity desired.

The exercises consist of a series of simple movements of each limb and of the trunk made against slight resistance, so that every muscle of the body, as far as possible, is in turn brought into play. The movements should be made slowly and systematically, and a short interval should be interposed between each. They should be stopped if the patient experience the slightest distress in breathing or palpitation or discomfort of any kind; as soon as he is rested they may again be proceeded with. The resistance to each movement should be slight, and should be made by a trained attendant. The movements consist of flexions, extensions, adductions, abductions, and rotations of each limb in turn, and of flexion, extension, and rotation of the trunk. The following is a de-

scription approximately of the various movements and of the order which is usually followed in their exercise:—

The patient stands upright with his arms by his side, or if too weak he may sit down. Movements of the upper extremities are first practiced, beginning with the exercise of muscles round the shoulder-joint. The attendant stands facing the patient, ready to direct and resist each movement: 1. The arms are abducted from the sides of the body and raised till they are parallel to one another in a vertical position above the head; they are then brought back again in the same way to their original position. 2. The arms are rotated forward till they are on a level with the shoulder, parallel to one another in front of the body; they are then brought back again to the sides of the body. 3. The arms still being straight, the two hands are made to touch in front of the body at the level of the shoulder, and the arms are then moved outward till they are as widely separated as possible, making with the body the form of a cross; they are then brought back again in the same way. 4. Movements of internal and external rotation at the shoulder-joint are next practiced. 5. The hands being brought on a level with and close to the shoulders, they are pushed forward till the arms are straight and parallel in front of the body at the shoulder-level; they are then brought back again. 6. The forearm is flexed and then extended at the elbow-joint. 7. The forearm is pronated and then supinated. 8. The wrist and each of the fingers and the thumb are flexed and extended alternately, each in their turn. 9. The body is bent forward from the erect position, as in making a deep bow, and is then gradually extended again till the erect position is again attained. 10. The feet remaining fixed, the trunk is rotated first to the right and back again, and then to the left and back in the same way. 11. Flexion at the hip-joint of each limb in turn is made till it is raised as nearly as possible to an horizontal position in front of the body, the knee being kept straight; the limb is then brought back again to its original position. 12. Extension is next made till the leg is raised as far as possible behind the body; it is then brought back again. 13. Each leg is then abducted and then adducted in turn. 14. Exter-

nal and internal rotation of each lower extremity at the hip-joint is performed. 15. Next, in a similar fashion, movements of flexion and extension at the knee-joint are made, and movements of flexion and extension and of inversion and eversion of the foot may be performed.

No movement should be repeated except after an interval, the object of the exercises being to bring consecutively into gentle action each group of muscles in the body as far as possible. The resistance to the movements is made by the attendant taking hold of the limb which is being moved, and gently opposing its movement.

The results of the exercises are similar to those produced by the baths on the circulation and heart. The pulse-frequency is diminished; its volume and force are increased. The area of cardiac dullness in cases of cardiac dilatation is diminished and the size of the liver reduced. Dr. Schott's theory is that, as a result of each bath or series of exercises, the heart is stimulated as the result of a reflex process, so that its contractions become more complete and more forcible; and that, as a result of this frequent stimulation and more powerful action, the heart muscle undergoes hypertrophy, till at length the heart, in cases of valvular disease, becomes competent to cope with the

extra work imposed on it, or, in cases of dilatation from debility or other causes, recovers from its atonic condition by the improvement in the quality of its muscular coats.

Cases which are likely to derive most benefit from this treatment are: cardiac dilatation due to overwork or mental worry; mitral disease where the right ventricle is beginning to give way and compensation threatens to break down. In adherent pericardium with symptoms of cardiac embarrassment it should be tried. Cases of aortic incompetence are unsuitable unless symptoms of right-ventricle failure have supervened. Cases of aortic aneurism are unsuitable, as the sudden and frequent changes in the blood-pressure can but do harm. In true angina pectoris this treatment must be practiced, if at all, only with the greatest caution. It may be of service in relieving the embarrassment of the heart by vascular dilatation, and thus act like nitrite of amyl or nitroglycerin; but there is a risk of syncopeal attacks in which a fatal issue might result. In cases of fatty heart—that is, fatty infiltration, not fatty degeneration—accompanying general obesity this treatment should be beneficial, and is not attended with danger if carefully carried out.—*Practitioner.*

#### COMMON FORM OF "WHITE LEG" AFTER CONFINEMENT.

Dr. C. Hubert Roberts before the Obstetrical Society of London, gave details of sixteen cases of so-called "white leg" most commonly met with after confinement, with a short history of the literature of the subject up to the present date. He pointed out the differences observed in most text-books of the present day, and attempted to show briefly that the white leg described in such books is not the common variety met with after delivery. The form he himself had met with most frequently was not white, but livid, and pitted easily. In its production venous thrombosis played the chief part, and previous haemorrhage in or after labor was the predisposing cause. He believed that the term "white leg" included several forms of disease which differed in many

particulars, and he proposed the following classification: 1, Cases due to pressure. 2, Cases associated with general disease. 3, Cases of true septic nature. 4, Cases of thrombosis apart from sepsis. 5, Cases of thrombosis and sepsis combined.

The author referred in detail to his own (sixteen) cases which followed confinement, and formulated the following conclusions: (a) The form which he called thrombotic was the common variety after delivery, and not the brawny white leg, which was rare. (b) In such thrombotic legs there are not necessarily signs pointing to sepsis, such thrombosis being rather a blood-change associated with or due to severe loss of blood at the time of delivery. (c) The thrombosis in most cases starts primarily in the uterine and pelvic veins. (d) Such

thrombotic legs are not brawny and white, but dusky in color and oedematous, invariably painful, with definite "tender spots," the femoral or saphenous veins being constantly thrombosed. (e) Both legs may be affected, but always one after the other. (f) The onset of the disease is about the tenth to twentieth day. (g) Pyrexia is the rule for a variable period, but does not necessarily indicate sepsis. (h) Such cases run a definite course of about six to eight weeks. (i) Complications are uncommon, but pulmonary embolism is the greatest danger. (j) The prognosis in respect to life is good. (k) The prognosis for the leg itself is not good; the majority, perhaps, get well, but remain permanently damaged.

Dr. Horrocks asked whether the proposed classification should apply only to "white leg" occurring as a sequel of labor. He was not sure that the author had made out a difference between classes 4 and 5,—*i.e.*, cases of thrombosis apart from sepsis, and cases of thrombosis and sepsis combined,—and he asked on what grounds he had arrived at the conclusion that some cases of thrombosis were not due to any form of sepsis. If the thrombosis were determined by haemorrhage increasing the coagulability of the blood, one would expect the thrombosis process to follow immediately on the haemorrhage. This might perhaps, be explained on the assumption of the clot spreading, but the pyrexia would then have to be accounted for. Again, if white leg were due to increased coagulability of the blood one would expect to find the lesion on both sides at the same time, and not in one leg only or in the one after the other. The most plausible explanation of the left leg being more frequently affected was that the left side of the uterus was more liable to laceration and injury by reason of the occiput generally coming down on that side. He believed both forms of white leg to be due to some form of sepsis. It was possible that in some cases clotting in the veins was more marked than in the lymphatics, while in others the lymphatic element predominated, but this fact did not exclude sepsis. He pointed out that sepsis was not negatived by the absence of any evidence of para- (or peri-) metritis, for the micro-organism might not give rise to any inflammation of the connective tissue.

Dr. G. Herman thought that these were

cases of "swelled leg," and not what is technically described as white leg. Thrombosis might exist apart from sepsis, and this was quite a different complaint from thrombosis with sepsis. It would be interesting to know whether white leg occurred in cases in which thorough antiseptic precautions had been carried out. Unfortunately, they were not in possession of any statistics which enabled them to ascertain whether the affection was less frequent now than before the introduction of antiseptic methods. In the rare fatal cases of phlegmasia alba dolens death occurred in quite a different way from death by sepsis. Swelled leg from thrombosis was a different thing from true phlegmasia dolens, which Dr. White, of Manchester, described as "painful white oedema." His own cases had almost always been treated by applications of belladonna and glycerin, and he had been unable to form any opinion as to the color. Though there was little or no anatomical evidence of the disease being due partly to thrombosis and partly to lymphangitis, there was clinical evidence thereof. The author did not suggest that the loss of blood directly determined the affection, but rather that it favored its production.

Dr. A. Routh suggested that if the author had seen these cases quite in their original state he might possibly have discovered some of the characteristic appearances of true phlegmasia dolens. One did not usually see them until the first stage had passed. He related the case of a lady who was seized with acute pain in the left calf, and when he saw her three hours later the limb was two inches larger than the other and presented all the appearance of typical white leg. It was treated by warmth, etc., and by the next morning the swelling had gone down and there was pitting. It was, therefore, quite possible that most of the so-called cases of thrombosis might have begun by lymphangitis. The fact that the affection arose so long after the anaemia showed that it could not be due to mere plugging of the veins, and there was probably, in addition, some change of a septic character,—an assumption which was supported by the rise of temperature. The spreading of the thrombotic process did not explain it either, for he had seen it in cases in which the femoral vein was not obstructed in the least.

Dr. Macnaughton Jones had been struck

by the differences observed in these cases in the date of onset, sometimes early,—i.e., between the seventh and eighth days after labor,—while in others it supervened much later; the rapidity with which the brawny state made itself manifest; the early supervention of the “pitting” stage; the rapidity with which this stage passed off; the degree of pain, the variations of temperature, etc. Personally he had always felt more disposed to adopt Tilbury Fox’s view, that the affection began in the lymphatics rather than in the veins, and possibly some of the differences observed might be due to predominance of the changes in the veins and in the lymphatics, respectively. He agreed with the view that the affection sometimes occurred independently of sepsis. Pressure as a cause was proved by two cases which he had met with, in which no symptoms, whatever, of any septic condition were present previous to the characteristic appearances of phlegmasia. This pressure had been accounted for anatomically by the peculiar injuries to which the left side of the uterus was supposed to be liable, but that view did not commend itself to him. He pointed out that on the left side the artery overlay the vein, which was a more likely cause of pressure. He had seen cases occurring independently of labor in which there was no possible septic cause in which phlegmasia had developed. In several it developed in varicose veins of the leg after an illness of some kind, and the trouble probably began in the lymphatics. Oscillations of temperature after labor were often noted quite apart from any complication of this kind; so that the mere rise of temperature was not enough to enable them to affirm that there was sepsis. Moreover, there might be no discoverable condition in the uterus or its adnexes to account for the leg trouble.

Dr. Griffith agreed that there were essential differences between the disease as described in the text-books and those due to simple thrombosis. He did not think the author’s explanation was quite admissible as to the cause of the thrombosis. He had examined two cases very carefully, post-mortem, and in both the thrombosis had extended from the uterine sinuses up to the uterine veins. Given the size of the latter, it was quite conceivable that they might be thrombosed without giving rise to any constitutional symptoms, and it

was not until there was a sudden interference with the circulation in such a large part as the leg that characteristic symptoms appeared.

Dr. Robinson mentioned that Vidal, of Paris, claimed to have discovered in many of these cases a streptococcal invasion of the thrombosed veins. By others the bacillus coli communis had been incriminated, though of this no direct evidence had so far been adduced.

Dr. Champneys failed to see that Class 1 was necessarily different from Class 4, because pressure would be very likely to lead to thrombosis. He remarked that, in the author’s cases of double phlegmasia, the disease commenced in three out of the four on the right side, which in his own experience was quite exceptional.

Dr. A. Giles observed that in only one case was the history of sepsis at all definite, in which there was abscess, with sloughing. That case was one of miscarriage at three months, whereas all the other cases appeared to have occurred after delivery at term. The explanation of the left side being more frequently affected in consequence of the nature of the presentation did not appear to be valid, for, if the down-coming head caused the trouble, its effects would be mainly appreciable on the cervix, and the pelvis would suffer rather than the leg.—*Medical Press and Circular*.

#### Deaths from Cycling.

In a recent session of the Paris Academy of Medicine, Petit reported three deaths occurring suddenly during the use of the bicycle. The first case was that of a man sixty-five years of age who had begun to ride four weeks previously. He died in the arms of his teacher as he was about to get off his wheel. The second case was that of a physician, aged forty-eight years, who for the sake of reducing a corpulence which had come on after typhoid fever took to cycling. Without previously having complained of heart symptoms he was one day, while on his wheel, suddenly taken with dyspnoea and a severe pain in the heart region. He stopped, sat down on a bench and died in a few moments. The third case was that of an athlete, aged forty years, who died suddenly on the street while cycling.—*Deutsche med. Woch.*

## PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

## MEDICINE

## Treatment of Appendicular Colic and Appendicitis.

M. Leon Joubert of Mont Dauphin (*Hautes-Alpes*), in a paper on this subject gave the details of three consecutive cases of cure by rectal injections of glycerin in large doses. He is firmly convinced that this remedy should be employed in every case before attempting laparotomy—an operation less dangerous, it is true, in these days of anti sepsis, but often impracticable in the country, in the colonies, or at small military camps, where the physician finds himself without assistants or without the necessary armamentarium.

## Cinnamon for Cancer.

The *Cincinnati Lancet-Clinic* quotes from the *Pacific Record* as follows: J. Carne Ross, M.D., physician to the Ancoats Hospital, Manchester, communicated a letter to the *Lancet* of July 21, 1894, in which he gives the results of some experiments he has undertaken on the above subject. Dr. Ross states that while carefully guarding himself from saying anything that would suggest that cinnamon should be regarded as a so-called specific in cancer, yet he has invariably found that where pain was present it ceased, that fetor disappeared, that the general health invariably improved after using the drug. The best results have, on the whole, been obtained where the tumor was cut off from the air by being situated either in the stomach, the rectum, the uterus or the mammae, where the superjacent skin and covering of the nipple were intact. Dr. Ross then gives particulars of five cases which were under the cinnamon treatment, in each of which marked improvement ensued. The preparation of cinnamon employed was a strong decoction, made by taking one pound of Ceylon sticks and boiling slowly in a closed vessel for eight hours in three pints of water till the water is reduced to one pint, pouring off without straining. The mixture should be shaken up before taking each dose; patient to drink half a pint every twenty-four hours, the half pint to be divided into such doses as best suit the patient.

## Weak Heart.

Dr. J. M. DaCosta, (*Univ. Med. Mag.*,) recognizes the following varieties of weak heart: That dependent upon degeneration of the cardiac muscles, especially the fatty heart. That connected with dilatation of the heart. That resulting from the action of certain poisons on the nervous mechanism of the heart. That due to an intrinsically weak

muscle, and finally, that resulting from nervous exhaustion.

## Collective Investigation on Anæsthetics.

GURLT, of Berlin, states that the collective investigation has now been going on for five years. This year 52,677 new cases were reported, of which 31,803 were chloroform narcosis, with 23 deaths, and 15,712 were ether narcosis, with 5 deaths. In 2,148 cases narcosis was produced by a mixture of chloroform and ether, in 1,554 by the so-called Billroth mixture, in 1,425 by ethyl-bromide, and in 34 by pental. The use of ether has much increased. The mortality from chloroform seems to be much greater than that from ether; but very often grave disorders of the respiratory organs, such as pneumonia and bronchitis, result from the inhalation of ether, and death from those complications ought to be regarded as equivalent to death under anæsthetics. Ether was especially harmful after laparotomy.

DR. SCHLEICH, of Berlin, explained his theory of the action of anæsthetics. According to him, they are more dangerous the more their boiling-points differ from the temperature of the body. He has devised an anæsthetic mixture (chloroform and petroleum-ether) whose boiling-point is the same as the temperature of the body, and states that he has obtained excellent results, all the disagreeable symptoms (vomiting, etc.,) being absent.

DR. ROSENBERG, of Berlin, recommended that the mucous membrane of the nose be brushed with a solution of cocaine before the commencement of the narcosis.

DR. REHN, of Frankfort, gave a warning against the use of chloroform near a gas-light, as ethylene-chloride is formed.—*Lancet*.

## Treatment of Epitheliomata.

Professor John A. Wyeth, M.D., in a clinical lecture delivered at the New York Poly-clinic and published in the *International Journal of Surgery* for May, speaks of the benefit he had derived from the use of arsenious acid in the treatment of the superficial epithelioma. He says: "If I had a superficial epithelioma develop anywhere on my body where I could use Maraden's paste I would prefer that method of treatment to the knife. In cases where the disease has existed for so long a period that the paste alone cannot be relied upon, I would prefer to have the malignant process first cut or scraped away, and then have the paste applied. In this way we get more satisfactory results than by any other treatment I know of."

"The formula for Maraden's paste, which I

have given a number of times, is as follows:

Acid arsenious.....	2 drams
Pulv. gum arabic .....	1 dram
Cocaine muriate.....	18 grains

This powder should be made into a paste by adding water, when it is to be used: and the paste should be of the consistency of rich cream, and applied to the wound on a small piece of cloth, and left on from eighteen to thirty-six hours. This can be repeated as often as necessary. The above is the formula for the stronger paste. In the weaker, only one dram of arsenious acid is used, and twelve grains of cocaine."

#### Alcoholic Applications in Phlegmonous Inflammation.

According to Salzwedel (*Deut. milit. artzl. Zeit.*, 23) under constant application of dressings of 60 to 90 per cent. alcohol, phlegmonous inflammations of the milder sort undergo almost abortive resolution, while severer cases show unusually rapid softening, and terminate early in circumscribed abscesses containing thin pus. The details of the procedure are as follow: After the skin has been washed with ether, and any wound present covered with an antiseptic mull, a moderately thick layer of absorbent cotton wool, soaked in the alcohol, is applied, and over it some waterproof material, perforated or cut in strips so as to retard but not wholly prevent evaporation. The application is renewed daily, and should be continued a few days after subsidence has begun.

### SURGERY.

#### The Treatment of Hydrocele.

The treatment of hydrocele by the injection of irritating substances is sometimes very painful. The use of cocaine as a local anaesthetic in the ordinary way was not being free from danger. Nicaise has since 1889 (*Acad. de Med.*, June 4th; *Sem. Med.*, June 5th) employed the following method:—The usual antisепtic precautions being taken, the hydrocele is punctured with an ordinary trocar; about one-third of the fluid is allowed to flow away, then 3 to 4 c.cm. of a 1 per cent. watery solution of cocaine is injected into the bulk of the serous effusion remaining in the sac, through the canula of the trocar with a syringe of the capacity of 4 c.cm. The scrotum is then gently manipulated, and after waiting four or five minutes the remainder of the serous fluid is drawn off. Next tincture of iodine, either pure, or mixed with one-third of water, according to the age of the hydrocele and that of the patient, is injected. The scrotum is again gently manipulated, and after four or five minutes the iodine is allowed to escape. The operation done in this manner is painless. The method has the advantage of utilising a natural aseptic fluid as the excipient of the injection. Moreover, the quantity of cocaine absorbed by the serous surface is less in the case of a

serous solution than of a watery solution of the medicament of the same strength—*Brit. Med. Jour.*

#### Compound Tincture of Benzoin in Surgery.

Dr. J. L. Garland Sherrill (*Amer. Therapist*) highly recommends compound benzoin tincture in cases of injuries about the hands, especially those by machinery. The manner of application is as follows: After careful cleaning and disinfection of the wound and complete arrest of hemorrhage, a layer of absorbent cotton is placed around the wound, over which the tincture is poured until the cotton is saturated. This forms an air-tight aseptic coating after evaporation of the alcohol. This dressing is claimed to be very advantageous in the practice of the country physician, because it need not be frequently changed, and can sometimes be left on for a week without inconvenience. If it becomes loose, a little more benzoin tincture may be added by the patient.

#### Treatment of Sebaceous Tumors.

Many people, the subjects of congenital sebaceous tumors and "wens," object to having them removed, on the score that the remedy is worse than the disease, and the after consequences may be serious.

The following is the method which Dr. T. Murray Robertson has adopted in such cases, and with marked success (*Brit. Med. Jour.*): With a cataract knife (Graefe's) puncture the cyst, and gently squeeze out the contents. Then introduce a very small piece of nitrate of silver. On the following day, by means of a pair of forceps, the capsule of the cyst can be withdrawn, just like the shell of a bean, without any portion being left adherent. In no case has there been a return of the growth or any ill effects.

The method, if tried, will be found to have many advantages, aside from its simplicity and thoroughness.

#### Operations for Cancer.

Dr. Roux, of Lausanne, discussing this subject, remarks that the former teaching concerning constitutional cancer, the absence of antisepsis, and the fear of relapse discouraged the most intrepid surgeons from attempting on malignant tumors any but insignificant and palliative operations. From the characteristics of cancer he admits that it is a parasitic disease resembling tuberculosis in its clinical evolution; it is necessary, therefore, to attack it with the same energy and promptness as the latter affection. Too often we operate too late, when it is impossible to prevent a relapse. This fact filled the earlier statistics and continues to darken the present ones. As soon as the diagnosis is assured we should intervene by the bloody method, always making a systematic and carefully detailed toilet of the ganglionic chain, even if it is healthy in appearance. That the principal cause of relapse is the late period at which we operate is proven by his personal observations upon three groups of

cancer cases: those of the breast, the uterus, and the gastro-intestinal tube. The operable cases of cancer of the stomach reached 12 per cent.; those inoperable, 88 per cent., a part of which were susceptible of palliative operation. The mortality from pylorectomy for cancer was from one-fifth to one-seventh; that from gastro-enterostomy, one-seventh. For cancer of the uterus there was 68 per cent. of the cases inoperable and 32 per cent. operable, only one-fourth of which were operable by the sacral method. The mortality from vaginal hysterectomy was 8 per cent. and from sacral hysterectomy 11 per cent. As regards cancer of the breast, for which intervention is most easy, he counts twelve absolutely inoperable cases, while in more than 50 per cent. of the cases it was possible to predict an early and fatal relapse. The mortality reached 5 per cent.—that is to say, it was equivalent to the general mortality of all the operations. There is no doubt that early operations will prevent relapses, since in the deplorable conditions under which we now operate we actually have some cures. He cited at hazard cases of gastro-intestinal cancer without apparent relapse for three years; cancers of the rectum without relapse after four years; a cancer of the uterus, which had invaded the vesical walls; a villous cancer of the kidney of extraordinarily difficult extirpation and without relapse for five years. He had removed the tongue in a case that had relapsed nine years after an operation by Dr. Kocher. Among his cases was one of survival for eleven years from cancerous goitre, and a cancer of the testicle that had not relapsed at the end of twelve years. Histological examination had left no doubt as to the nature of these tumors.—*Semaine Med.*

#### Indications for Operation in Head Injuries.

Bullard asserts that the primary condition for immediate operation in severe head injuries is increased intracranial pressure. The question of operation in such cases depends on the degree of pressure. When the patient is in a condition of deep stupor and cannot be roused by supraorbital pressure, an operation is imperative. When, however, unconsciousness is deep but the patient can still be roused, the indication is less definite. Much will depend on the presence or absence of a tendency to an increase of unconsciousness. In any doubtful case the most careful watch should be kept for any increase in the degree of unconsciousness, and as soon as this has been clearly determined, an operation should be performed. The surgeon should act also in all cases in which, whether the patient be only lightly or deeply unconscious, there has been a rapid increase in the degree of unconsciousness, or a distinct increase of paralysis of the extremities within the course of a few minutes or hours after the injury. Delirium without unconsciousness, the author holds, contraindicates operation or indicates that the surgeon should not operate at once. Localized cerebral irritation as evidenced by clonic convulsions, either general or local, is not, it is believed, a common sign of head

injury. In cases in which there is no history, convulsions render it probable that the case is non-traumatic, or that some ordinarily non-traumatic condition has been set up by the injury. In cases in which there is no evidence of paralysis, and no pupillary symptoms are presented, the surgeon must consider the general condition of the patient. As a rule, the author would advise operation in any case in which the patient (an adult) could not be roused by supraorbital pressure and the pupils do not react to light. In all conditions of lasting unconsciousness, stupor and coma, there is, the author asserts, an increase of intracranial pressure. Such pressure is not always due to haemorrhage, but in many instances is the result of swelling of the brain analogous to the so-called acute cerebral oedema. In such instances the author would recommend a large opening—at least 2 inches by 1—in the skull, and incision of the dura mater. There is no more danger, he holds, in opening this membrane under proper antiseptic precautions than in opening any other serous cavity. The operation should be performed as rapidly as possible. In children many deaths are caused in operations of this kind by loss of time. In adults the consequences are not, as a rule, so serious; still, next to asepsis, time is probably the most important factor in the success of an exploratory cranial operation.—*Boston Med. and Sur. Jour.*

#### Excision of the Vas Deferens for Prostatic Hypertrophy.

Pavone (*Il Policlinico*) has made a series of experiments on dogs with regard to the effects of removing the testes or the vas deferens alone. He finds that bilateral excision of the vas deferens in dogs brings about the same atrophy of the prostate as castration. Drawings of the microscopic appearance of prostates after castration and excision of the vas deferens respectively show that practically the same changes occur after both operations. The author therefore recommends excision of the vas deferens for prostatic hypertrophy in preference to castration as being a simpler operation, causing less mutilation and less mental shock to the patient, and giving equally good therapeutic results.

#### A New Method of Treating the Congenital Dislocation of the Hip.

Mr. Arbuthnot Lane recently presented at the Clinical Society of London, two patients upon whom he had operated by a new method. This consisted in removing the head of the femur from its movable position on the dorsum ilii to a secure position below the anterior inferior spine of the ilium, to which it was sewn, with the result that the lordosis was lessened, and the walking powers of the patient were increased to very little below the normal. The advantage will not be equally great when there is a double dislocation. The operation is not intended to supplant that of replacing the head of the bone.